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ECONOMICS

THE IMPACT OF EUROPEAN INTEGRATION ON THE ECONOMIC SECURITY OF BUSINESS IN UKRAINE

Olena Bogma,

Dr. Sc. (Economics), Professor,

Hanna Silakova,

Ph.D. (Economics), Associate Professor,

State University of Trade and Economics, Ukraine,

Oksana Vialets,

Ph.D. (Economics), Associate Professor,

Institute of Post-Diploma Training of

National University of Food Technologies, Ukraine

Annotation. *The article substantiates the relevance of studying the impact of European integration of Ukraine on the level of economic security of domestic enterprises as a central link in the country's economic system. The positive and negative consequences of the influence of the European integration process on the economic security of business in Ukraine are systematized. The main scenarios of the impact of the process of European integration of Ukraine on the economic security of its business are determined, their content is considered, the directions of positive and negative changes for the economic security of enterprises in the context of certain scenarios are established. The main internal and external factors that hinder the process of European integration of Ukraine have been identified.*

Keywords: *European integration, economic security of an enterprise, threat, business, opportunities, scenario.*

Formulation of the problem. In the current conditions of Ukrainian realities, domestic business operates in conditions of instability and uncertainty, which are exacerbated by the impact of the global covid 19 pandemic, the unstable political situation and a number of negative processes taking place in the national economy. The ongoing war with the Russian Federation and the imposition of martial law in Ukraine have maximized the level of unpredictability and risk in the conduct of business activities of enterprises in Ukraine, complicated the opportunities and worsened the prospects for their development.

The current state of affairs activates and actualizes the European integration of Ukraine, which will have decisive geopolitical and economic consequences both for Ukraine as a whole and for domestic business. In particular, it affects the possibilities of ensuring and strengthening economic security, which is a prerequisite for the existence of any enterprise. The above is connected with the fact that it is the ability of the enterprise to identify threats in a timely manner, prevent the consequences of their adverse effects, minimize the negative impact or adapt to it directly depends on the possibility of the

further existence of the enterprise, efficiency and success of its activities, which, in turn, is associated with ensuring the necessary and sufficient level of economic security.

Economic security is a state of security of the economic system and economic processes of the enterprise, which provides the ability to prevent the occurrence, minimize and overcome the consequences of internal and external threats, the ability to maximize effectively realize priority economic interests in the conditions of variability of the external business environment, using the available resource potential and sustainability reserves self-improvement [1, p. 74].

In such conditions, the study of the impact of European integration both on the level of economic security of Ukraine, and, in particular, on the level of economic security of domestic enterprises, as the central link of the country's economic system, is updated, especially given the desire domestic business to expand its presence and obtain the status of active participants in the European and international markets.

Let us note that, on the one hand, the ongoing war with Russia dealt a crushing blow to the domestic economy, on the other hand, it prompted the European Union to intensify geopolitical steps and significantly accelerated the process of European integration. In particular, Ukraine has already received candidate status, which officially launches the process of obtaining Ukraine's EU membership.

The next step should be the adoption by the European Commission of a positive report on Ukraine and the start of the negotiation procedure, preferably no later than 2023. In such conditions, the strategic goal of Ukraine is to complete negotiations on accession to the EU in 2027-2028 and expect to receive full membership in 2029, when new elections to the European Parliament and the formation of a new composition of the European Commission will take place [5].

Preparation for membership will include the completion of a comprehensive transformation in all areas, which will create conditions for Ukraine to live according to the principles of the European Union and its laws aimed at protecting every citizen and business, opens up opportunities for obtaining financial assistance for the purpose transformation of society, legal system and economy on the way to EU membership [7]. Based on this, we can conclude that Ukraine's entry into European economic and security structures opens up new opportunities for domestic enterprises and strengthens their position in the international market. This accordingly affects the economic security of domestic business in the direction of its strengthening.

Thus, the relevance of the study is due to the emergence, under the influence of the European integration of Ukraine, of opportunities to strengthen the level of economic security of domestic business on the basis of the formation of new economic ties instead of the lost ones (against the background of negative changes parameters of the external environment for the functioning of enterprises, a drop in the volume of activities to its complete halt, a break in supply chains and infrastructure, a crisis in effective demand, an increase in the magnitude and number of risks); increasing the competitiveness of domestic business; mutually beneficial economic partnership; large-scale renewal and modernization of the country's economy.

Analysis of Recent Research and Publications. The role of European integration in ensuring the economic security of the countries of Europe and Ukraine is studied by such domestic and foreign scientists as: I. Babets, I. Bezzuyu, I. Bulakh, I. Wallerstein, Z. Gbur, L. Kormich, T. Levitt, K. Ohmae, A. Stavitsky, L. Tushinskaya, F. Fukuyama, O. Shimanskaya and others. The issues of formation and strengthening of the level of economic security of domestic enterprises in the conditions of European integration, economic risks and business opportunities arising in connection with the process of implementing the European aspirations of Ukraine are devoted to the study of such domestic scientists-economists, like T. Adamenko, A. Vergun, V. Volkovskaya, A. Glushchenko, S. Ilyashenko, A. Kozachenko, A. Orlik, P. Polyakov, D. Tulenina, L. Yaremko, etc.

The analysis of these and other publications proves that there is a need for additional research to identify the impact of the European integration of Ukraine on the level of economic security of domestic business, opportunities and threats to the economic security of domestic businesses objects in the conditions of the formation of the European economy in Ukraine.

Formulation of the problem. Despite the theoretical and practical significance of the conducted scientific research in the field of development and formation of the modern concept of economic security of enterprises in the conditions of the European integration of Ukraine, there are still debatable issues of further development and strengthening or, conversely, worsening the economic security of enterprises in Ukraine under the influence of European integration.

In this regard, the purpose of this article is to systematize the positive and negative consequences of the impact of the European integration process on the economic security of business in Ukraine.

Research results. In general, European integration is the formation and further strengthening of ties with European countries at all levels - interstate, interregional, between individual economic entities, which are of a complex nature - economic, political, social, cultural, etc. [3, c.113]. The European integration of Ukraine is very important for the formation of an effective mega-economic space for the stabilization of the European economy [2, p. 101], improving the position of our country in the world economic system and ensuring its sustainable economic development. Therefore, the impact of the implementation of the European integration strategy of Ukraine on the economic security of domestic enterprises lies in the qualitative changes in the areas of activity and the formation of a set of possible positive consequences of its formation, strengthening and development.

Thus, European integration generates new opportunities for domestic business as an active participant in global economic activity and can be considered as one of the most powerful drivers of growth in the level of economic security of an enterprise due to:

- the emergence of new knowledge and opportunities to create new products and quickly bring them to the market;
- overcoming technological backwardness on the basis of access, rapid dissemination, introduction of new technologies and their unification through close international

cooperation and exchange of scientific research, which, in particular, leads to an increase in product quality and reduces production costs and transportation of products, increases the level of competitiveness of domestic producers, etc.;

- strengthening the position of domestic business in the domestic and foreign markets due to the growth of product quality;

- the opening of new markets and the growth of trade flows: the volume of exports of goods and services, in particular, due to the abolition (reduction) of customs tariffs, duty-free quotas and non-tariff restrictions, the costs of foreign economic activity are correspondingly reduced;

- increasing the efficiency of movement and the emergence of new favorable opportunities and simplifying access to raising capital (long cheap money), in particular, attracting foreign investment, grant assistance, regional development funds of the European Union;

- improving the business and investment climate for domestic businesses;

- harmonization of national and international standards of production and product quality, which can help expand the access of domestic enterprises to the markets of third countries;

- strengthening the competitive advantages of domestic business through the implementation of international, in particular, science-intensive high-tech projects;

- development of innovative and financial infrastructure;

- creation of opportunities for information and technological interchange between enterprises in science-intensive industries, which in particular will contribute to an increase in the output of products with a higher added value;

- improving the quality of functioning of institutions in the financial, budgetary, banking, investment areas and corporate governance;

- carrying out large-scale political, economic, social and institutional reforms and modernization of the economy, modernization of enterprises, macro-financial stabilization;

- participation in programs to support small and medium-sized businesses;

- improving the quality and standard of living and the growth of the purchasing power of the population, which will be reflected in the growth in demand for goods and services of domestic enterprises.

It should also be borne in mind that as part of supporting the European integration course of Ukraine, and in order to support our country in the conditions of a large-scale war, the European Union will not impose import duties on Ukrainian goods for a year, which will allow domestic businesses to save tens of millions of dollars.

The European integration of Ukraine provides a significant level of economic benefits both to the country as a whole and to domestic business, including through the creation of effective mechanisms for economic stability and security.

Thus, enlargement will become an important factor in accelerating the economic development of new EU members, which means the emergence of new business opportunities for Ukraine [6, p. 212].

Along with this, Ukraine's entry into the European economic space can not only give

a favorable impetus to strengthening the economic security of domestic business, but also generate additional threats to the economic security of domestic enterprises due to:

- increased mobility of the population, which generates the risk of a rapid outflow of labor, which increases pressure on the domestic labor market and creates problems for enterprises to access quality labor resources;
- increasing competition in various sectors of the economy, in particular, in the manufacturing sector due to the influx of a significant amount of goods and services from the EU countries, along with this, a high level of competition in the European market may make it difficult for domestic producers to enter new markets;
- growth in the size of production costs of domestic business as a result of the approval of EU norms and standards;
- the slow process of moving European countries into a digital future can complicate the process of digitalization of domestic enterprises;
- growing influence of transnational corporations on the economy of Ukraine;
- increase in the costs of domestic producers for the renewal of fixed assets, skilled workers, innovation due to increased requirements for product quality.

It should also be noted that in addition to the general positive and negative consequences of the impact of the process of European integration of Ukraine on the economic security of its business, it is advisable to consider the impact of this process in the context of three main scenarios (Table 1).

From table. 1, it can be concluded that the impact of the process of European integration of Ukraine on the economic security of domestic business may differ significantly depending on the implementation of the corresponding scenario of European integration, which actualizes the expediency for domestic enterprises conduct a thorough systematic monitoring of the external environment, in particular, in terms of the dynamics of the European integration process and the possibility of expanding the presence in the European market in order to timely adapt the economic security strategy to the ongoing changes.

It should also be noted that the process of European integration of Ukraine and the implementation of pro-European reforms today is hampered by the presence of certain internal factors, among which we should highlight the slowness in economic reforms; lack of noticeable internal results socio-economic transformations; high level of corruption and economic crime; shortage of experienced specialists in European integration, primarily among the political elite and civil servants of Ukraine; a huge gap in the levels of economic development of Ukraine and European countries; a significant difference in the standard of living of the population; inconsistency of legal systems [4, p. 114]; the presence of a significant common border with russia and Belarus, relative poverty and one of the lowest GDP per capita in Europe (which will be further reduced due to the war); excessive bureaucracy, insufficient efficiency, unreformed and corrupt system government controlled. The main external factors hindering the European course of Ukraine include the ongoing war with the russian Federation and the lack of a unified position among European countries, the opposition or wait-and-see position of individual

EU member states due to fears or unwillingness to break close ones connections with russia.

Table 1

Main scenarios of the impact of the process of European integration of Ukraine on the economic security of its business.

Scenario	Content	Impact on the economic security of the enterprise
Optimistic	A significant influx of foreign investment for the restoration and improvement of the domestic economy, the opening of new markets and access to new technologies and resources; qualitative and quantitative growth of all sectors of the national economy, GDP growth	Impact on the economic security is positive. Domestic business will have access to investment resources, which will intensify the implementation of new investment projects, will allow attracting significant amounts of investor capital; enterprises, operating in most segments of the domestic economy, receive positive financial results.
Pessimistic	Transnational corporations (TNCs) on the basis of mergers and acquisitions acquire a dominant position in the economy of Ukraine, which leads to the transition of the main sectors of the economy to TNCs; there is a competitive intervention of foreign manufacturers in the Ukrainian market, at the same time access Ukrainian producers to foreign markets is limited by the quota mechanism; stagnation of certain segments of the economy due to the dominance of foreign manufacturers; increase in prices for goods as a result of equalization of prices in the Ukrainian and foreign markets; exodus of qualified people specialists and shortage of qualified personnel in the domestic labor market; use of Ukraine as a raw materials appendage (use of Ukraine's resources by the EU countries for their own purposes).	The impact on economic security is negative. The most attractive segments of the domestic economy will fall under the influence of international TNCs, which will force out the stagnation of domestic enterprises, while their dependence on international TNCs will increase; a consequence of competitive intervention for most domestic enterprises will be falling income and loss of part of the domestic market; along with this, tariff quotas in foreign markets will lead to a reduction in exports and limit the income of domestic enterprises from export operations; enterprises, working in certain sectors of the domestic economy, will feel the improvement however, most domestic businesses will face a drop in demand for their products and increased competition; due to the difference between prices in the domestic and foreign markets, domestic enterprises will seek to export certain types of raw materials and products, which will lead to a shortage or lack of resources of certain types for national producers; personnel shortage for domestic business.
Neutral	Significant changes in the Ukrainian economy due to institutional factors and restrictions, despite access to new resources and opportunities, will not occur. cases of successful entry of domestic business to foreign markets and successful partnerships with foreign companies will remain isolated.	Impact on economic security is negative. The preservation of the unfavorable situation that has developed today in the domestic economy will lead to the impossibility of strengthening economic security for the majority of domestic enterprises through the use of the advantages of the European integration strategy of Ukraine.

Compiled by the authors based on: [3]

Despite this, the path to European integration is a conscious and uncontested strategic choice of the Ukrainian society, which is only strengthened by the horrific trials that our country is going through now. Therefore, the process of building a modern Europe in Ukraine is certainly one of the keys to solving the large-scale transformational problems facing Ukraine and its enterprises now, in particular, in the context of strengthening economic security both at the country level and at the level individual business entities.

Conclusions. Thus, today European integration can be considered as one of the main tools for building an effective open economy in Ukraine and one of the leading drivers for strengthening and increasing the economic security of enterprises, industries, regions and Ukraine as a whole.

The process of European integration today is the chosen strategic course of the national economy. And, despite the fact that joining the European Union can really create considerable problems for domestic business, the benefits received still exceed them. Therefore, favorable changes in the level of economic security of domestic enterprises are directly related to their adaptation and use of the possibilities of European integration.

In turn, this requires fundamental changes in the functioning and conduct of business activities in the domestic and foreign markets, as well as the transformation of the existing strategy for ensuring and strengthening the economic security of both Ukraine as a whole, and domestic business and individual ones enterprises, which is a prospect for further scientific research.

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ANALYSIS OF CONSUMER NEEDS' TRANSFORMATION IN THE CONDITIONS OF DIGITALIZATION

Olha Liakhovych,

Ph.D. of Science in Economics, Associate Professor,

Antonii Zaluzhnyi,

Ph.D. of Science in Economics,

Olha Osadcha,

Doctor of Science in Economics, Professor,

Oksana Zinkevych,

Ph.D. of Science in Economics, Associate Professor,

Iryna Oplachko,

Ph.D. of Science in Economics, Associate Professor,

*The National University of Water and
Environmental Engineering, Rivne, Ukraine*

Annotation. *The article is devoted to the research of consumer needs and features of their transformation in the conditions of digitalization. Analysis of consumer needs showed a significant increase in the structure of the share of intangible needs due to the intensive development of information and communication technologies, virtualization of economic activity, growth of services in economic activity, globalization of the economy, the establishment of network structures.*

Two alternative consumerism's forms in the information-network economy are characterized in the article, namely: McDonaldization as consumption of mass, standardized needs and customization as a phenomenon of creative individualization of demand. This analysis showed the complexity and ambiguity of consumerism's forms in the economic plane, which intensifies the problem of developing new directions of economic policy in the consumer market.

The article describes that "economic man" is replaced by "creative man", with the needs of creative self-realization and development of intellectual capabilities, which is actually represented by prosumers or "consumer producers". A new type of prosumers (DIY-practices, "digital prosumerism", "culture of complicity", fandom communities, freelance, sharing, connected, couch-surfing, etc.) are able to objectively assess the quality of goods, services, and direct contact with manufacturers. The conclusions emphasize that meeting of prosumer's needs by creating goods of individual demand is an alternative to mass production and strengthens competitiveness in the new digital economy.

Keywords: *needs, consumption, digitalization, information, information goods, information services, consumerism, prosumerism.*

Needs are an integral part of economic processes, and the degree of their satisfaction is an indicator of socio-economic development of the country. Of particular importance are the needs in modern theoretical and methodological constructions of socially oriented economy, which is realized through the prism of substantiation of the concept of sustainable economic development. In such conditions, human capital becomes the

main driver of modernization transformations of the economy, and man and his needs come to the forefront of development of all spheres of the economy.

In such conditions, this category need to be explored not only in the context of the economic sphere and the satisfaction of material goods, but also from the standpoint of a mandatory component of the social system, shifting the emphasis to non-economic factors, including state of the environment, etc. In this regard, the UN Reports on Human Development (DLR) and the Human Development Index (Mahboub ul-Haq) proposed to the world community are especially relevant as synonymous with the concepts of "standard of living" and "quality of life", which are closely related to The main task of the modern information society is to increase the level of satisfaction of human needs in order to improve its well-being, namely: education, life expectancy, quality of human existence and general human development.

In fact, in 2009 the Commission on Economic Development, which consisted of about twenty well-known scientists from Western universities and research centers under the leadership of Nobel Laureate in Economics Joseph Stiglitz, developed a "Report on the Dimensions of Economic Development and Social Progress." In the proposed final document, the main dominant factor in socio-economic growth is not GDP, but consumption. Importantly, the main indicators of "quality of life" began to include indicators such as consumption, health and education" (Stiglitz, Saint, Fitussi, 2016). In this context, the process of revision of quantitative indicators of human well-being and the transition to qualitative parameters is monitored. Therefore, given that consumption is the main indicator of quality of life, there is a need to understand the problem field of economic behavior of consumers and consider the specifics of the formation of their needs in the context of digitalization. After all, the satisfaction of consumer needs reflects the level of human well-being, predicting economic growth.

At the same time, in the conditions of digitalization a new socio-economic reality is formed, in which the tendencies of change of subjects of consumption (values, interests, priorities, motives, needs) are traced; objects of consumption (significant increase in the structure of the share of intangible needs); conditions of interaction of economic agents (intensive development of information and communication technologies, virtualization of economic activity, growth of the service sector in economic activity, globalization of the economy, establishment of network structures, etc.). Human preferences are largely differentiated, goods and services themselves are directly modified. Under the influence of the emergence of new consumer needs there are significant transformational shifts in consumer demand.

Along with this, it should be noted that in the conditions of information and network transformation, not only the factors of influence, but also the structure of the needs of consumers change. In fact, according to the World Bank at the turn of the XX-XXI centuries, the share of services in gross domestic product has grown significantly in the most developed countries, in particular in the US economy in 2019 this figure reaches 77.3%, France - 70.1%, Belgium - 69.5%, Japan - 69.3 %, Italy - 66.4%, Denmark - 64.6% (see Fig. 1.). At the same time, in the structure of consumers' needs, services

in the provision of education and medicine significantly exceed their consumption of material goods.



Fig. 1. The share of services in the GDP of the most developed countries, %
 * Source: According to the World Bank (Services, value added (% of GDP))

In order to determine such changes, we analyze the growth rates of household consumption expenditures in Ukraine (see Table 1) Thus, in 2019 the highest growth rate of consumer expenditures was observed in expenditures on transport (52%), education (42.8%), communications (28.2%), restaurants and hotels (27.3%). This indicates that along with the growth of expenditures on food products, there is a pronounced tendency to increase the rate of expenditures on non-food products, including services.

At the same time, the improvement of electronic technology and digital technologies leads to radical changes in the information industry, gaining special expression in the development of mass media (television, personal computers), the emergence of global information networks, virtual reality and more.

Expenditures of the joint budget of households in the new information and communication conditions provide for an increase in their number for the purchase of information goods (mobile phones, computers, educational services, Internet connection). In particular, for the period 2000-2019, the volume of services provided in the field of telecommunications and postal services reflects a rapid upward trend.

As can be seen from Table 2, in 2005 the total volume of services increased 4 times (by UAH 20,550 million or 300%) compared to 2000. In 2010, this figure increased 1.7 times (by UAH 2,0006 million or 73%) compared to 2005. And in 2015, compared to 2010, the growth in the volume of services provided in this area amounted to 1.2 times (UAH 8,479 million or 17.9%) more. In the next three years, the growth rate is

somewhat faster. Thus, in 2018 its value increased 1.3 times (by UAH 16,690 million or 29.8%) compared to 2015. However, in 2019, for the first time during the study period, there was a slight decrease of UAH 987 million. or 1.4%.

Table 1

Indicators of growth of consumer expenditures in Ukraine, %

Costs (average per month)	Growth in 2017	Growth in 2018	Increase in 2019	Growth over analyzed period
Food and soft drinks	20,0	15,7	13,6	57,8
Alcohol	23	24,5	10,1	69,9
Tobacco	38,9	23,4	11,4	90,9
Clothes and shoes	26,2	15,9	13,78	66,5
Dwelling, water, electricity, gas and other fuels	32,2	5,2	10,4	53,6
Household items, household appliances and current maintenance housing	47,4	22,0	0,5	80,8
Health care	13,9	23	19,8	67,8
Transport	20,1	24,1	52,0	126,6
Communication	26,8	25,7	28,2	104,4
Recreation and culture	46	24	9,3	98,8
Education	34,5	3,3	42,8	85,8
Restaurants and hotels	29,3	23,9	27,3	104,8
Various goods and services	23,7	26,2	13,0	76,3
Consumer spending	24,4	15,4	15,3	65,6
Total costs	24,8	16,4	16,4	69,0

Source: Compiled by the author based on (Expenditures and resources of households in Ukraine, 2017, 2018, 2019)

It should be noted that during the study period 2000-2019, all types of services provided in the field of telecommunications and postal services tend to increase, except for fixed telephony.

Information in the information-network economy acquires the status of the highest value and an important resource of satisfaction of consumers' needs. In this regard, there is a trend of dominance of intangible needs, which appears in the form of sophistication (information, digital and network goods) and service, and informatization of needs, which is manifested through the prism of strengthening the role of services related to high educational and scientific level, knowledge of information support and digital (electronic) technologies (Khanin, Polyakov, 2018).

Table 2

The volume of implemented services in the field of telecommunications and postal services in Ukraine.

№	Indexes	Years							
		2000	2005	2010	2015	2016	2017	2018	2019
1	Postal and courier activities	519	1340	3248	4030	4823	4839	5944	6539
2	Fixed telephone connection	4570	9402	8196	7845	6518	6047	5651	4560
3	Mobile (mobile) communication	1275	14476	28835	33206	34077	35217	38521	37595
4	Broadcasting, retransmission of TV and radio programs, maintenance and operation of equipment in broadcasting networks, radio communication	160	673	1917	2431	2769	3045	3323	3358
5	Internet services	151	1009	4237	7144	9112	10818	12273	13727
6	Other types of communication	186	511	984	1240	4622	5522	6874	5820
7	Total	6861	27411	47417	55896	61921	65488	72586	71599

Source: Statistical Yearbook of Ukraine (2019)

In the new conditions of management, the economy appears as a movement of information with its inherent presence of global networks necessary for the relationship of economic entities. An important task of the new type of economy is the study of information and its impact on society. That is why the problem of production and consumption of information products occupies a special place in the conditions of digitalization. After all, information acquires the level of the most important good, and hence the demand for information needs. In this context, of particular interest is the problem of determining the behavior of participants in business processes, including consumers in condition of information technologies and global networks.

Dematerialization and intellectualization of goods and reduction of the life cycle of innovative goods (computers, mobile phones, tablets) are an essential feature of the transformation of consumer needs in the information and network economy in the context of rapid development of information and computer technologies. Materially heavy and dimensional elements are replaced by smaller, lighter and more information-intensive ones, because the acceleration of innovations leads to the improvement of product characteristics, significantly increasing their cognitive (knowledge) component. In information products, creative and knowledge components appear to be decisive, making them intellectually and information-rich. Increasing the intellectual potential invested in the product contributes to their functional diversity, influencing price increases.

However, a number of functions may never be used by consumers, as the consumption of innovative goods requires considerable effort and knowledge of the buyer.

Regarding the dematerialization of goods, this term refers to the phenomenon of reducing the importance of the material component and increasing its intellectual value. In this context, T. Sakaya in his work *The Value Created by Knowledge or the History of the Future* argues that the magic words “big and capacious” are being replaced by new ones - “compact and economical”, the principle of “the more, the better” thin-short-small” (Sakaya, 1999). At the same time, improving the consumer properties of computers, mobile phones, etc. such as the amount of RAM, power, etc., leads to a significant increase in demand and, consequently, the intensity of consumption of certain types of goods. The purchase of a certain type of goods marks a certain type of consumer's desired identity and the formation of an appropriate lifestyle.

Consequently, communication and information technologies have a significant impact on significant changes in the formation of consumer needs and (mechanisms) to meet them, leading to the emergence of new features (trends) in the context of digitalization (see Fig. 2).

In fact, theorists of information economics place special emphasis on complicating the economic behavior of consumers and the transformation of the human model in the economy (Maiminas, 1997). Thus, along with traditional consumers, new types of consumers emerge, generated by the modern economic system (globalists, demonstrative consumer, prosumers, etc.). Consumers-globalists, consumers-demonstrators are endowed with rather contradictory characteristics.

After all, modern marketing methods of product promotion largely determine consumer behavior, where fashion image and brand displace the requirements of the functional purpose of purchased items in the problematic field of satisfaction of needs and bring consumption to a demonstrative level (Zhurylo, 2020). At the same time, the characteristics of the types of demonstrative consumer behavior show the desire of young people to use high-tech and science-intensive goods, which is an expression not only of material prosperity but also a manifestation of individuality, achieving self-centered self-esteem, personal identity. Thus, the comprehensiveness and incontinence of consumption leads to social irresponsibility, mass, negative impacts on the environmental situation, undermining the sustainable mechanisms of existence, the destruction of society and civilization as a whole, which requires justification of alternative approaches "gentle", "inconspicuous" and "restraining" consumption.

The new computer-information reality is characterized by the assertion of consumer values of consumerism, which is characterized by the desire to master things (Zaluzhna, 2012), excessive consumption and trends of negative impact on the environment. In this regard, consumerism appears as one that protects the interests of consumers. It manifests itself in the absolutization of the role of things, their fetishization, which reveals the focus not on the thing itself, but its value and meaning from the standpoint of giving its owner the appropriate social level (status), lifestyle of certain social groups and more.

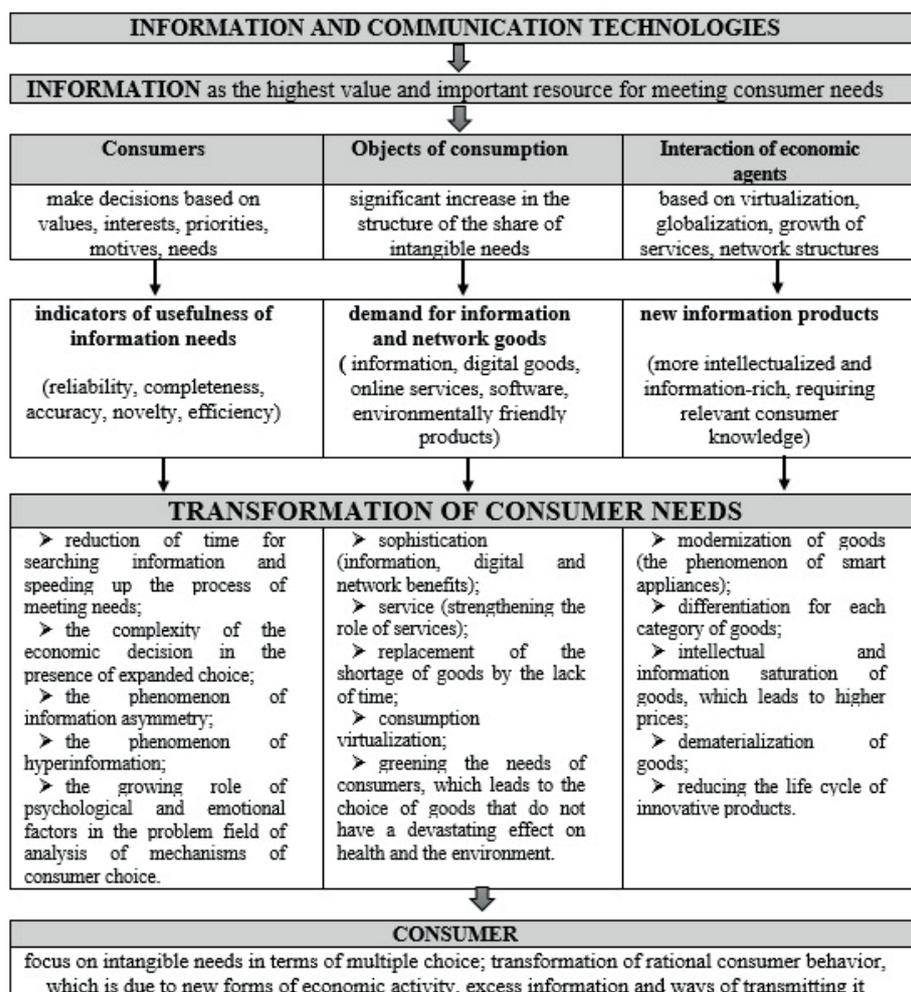


Fig. 2. Transformational shifts in consumer needs in the context of digitalization *
 * Source: developed by the author

In the new economic conditions, along with the consumption of mass, standardized needs (the phenomenon of McDonald's) in the consumer market, the phenomenon of individualization of demand (the phenomenon of customization) is rapidly established, which reflects significant changes in the structure of consumer needs. McDonald's acquires the characteristics of the focus on acceleration; increase of quantitative indicators; making big profits at low cost; predictability and calculation that excludes surprises; ease of choice due to limited offers; simplification of products that are consumed quickly (driving a car); theatrical communication. It is this approach in the economic space of consumer society produces the market of mass-produced goods, which is associated

with models of homogenization of consumption (product identity), displacing quality by the ideas of selfishness, efficiency and speed.

At the same time, the personalization of production, focused on the individual needs of the buyer and the requirements of the displacement of the conveyor approach, is traced in the context of the phenomenon of customization. In modern business conditions, customization is an important evidence of the need for customer focus and adaptation of goods to the specific needs of consumers. This is a new marketing paradigm that requires the accumulation of information about the individual consumer and the creation of individual products and services, reaching a compromise between the capabilities of the manufacturer and the wishes of customers.

It is no coincidence that the problem of studying the needs and features of their transformation in the context of digitalization becomes especially relevant, taking into account the role of a new type of consumer in the consumer market - the prosumer, who replaces the typical consumer. Prosumers (producers-consumers) realize their economic behavior through the prism of creating unique products or modifications acquired through the implementation of personal knowledge and skills. It is the ability of "competent consumers" to go beyond the accepted standards of mass society that reveals the urgent need to implement high-quality innovations in the field of commodity production and services, which involves the involvement of consumers in these processes on a partnership basis.

It should be noted that the peculiarities of the formation of prosumerism in the context of understanding the relationship "individual - information technology", "producer - consumer" are experiencing significant transformations in the modern information space. If in the industrial economic system the priority is "economic man" with its inherent desire to meet material needs, in the information and network economy is established "creative man" with the needs of creative self-realization and development of intellectual capabilities, represented by "producers - consumers".

The socio-economic preconditions for the emergence of prosumerism include: informational, scientific, technical, psychological. Thus, new computer technologies acquire the level of the main means and environment of economic activity, causing significant savings in time and costs for the integration of innovative technologies, better resources, new ideas, creative knowledge. In this regard, consumers become a significant economic entity involved in the development of new products, exclusive goods in the status of partners in the production process (Zaluzhny, 2021).

At the same time, information and communication shifts in the modern economic space, in which the information sector of the economy occupies a decisive place, encourage the formation of "information man" and the possibility of involving consumers in the transformation and processing of information and knowledge, innovation and more.

It is characteristic that globalization as a mechanism for forming collective unity that determines the contours of the future world order in the context of intensifying the problems of massification, unification, integration and loss of identity determines the alternative movement of personal uniqueness and individualization. It is in the

phenomenon of prosumerism traced the production of unique products as diametrically opposed to mass production, which is manifested by eliminating monotony through the prism of personal creativity, individual tastes and abilities, constant search for new, creating an atmosphere of moral and psychological satisfaction.

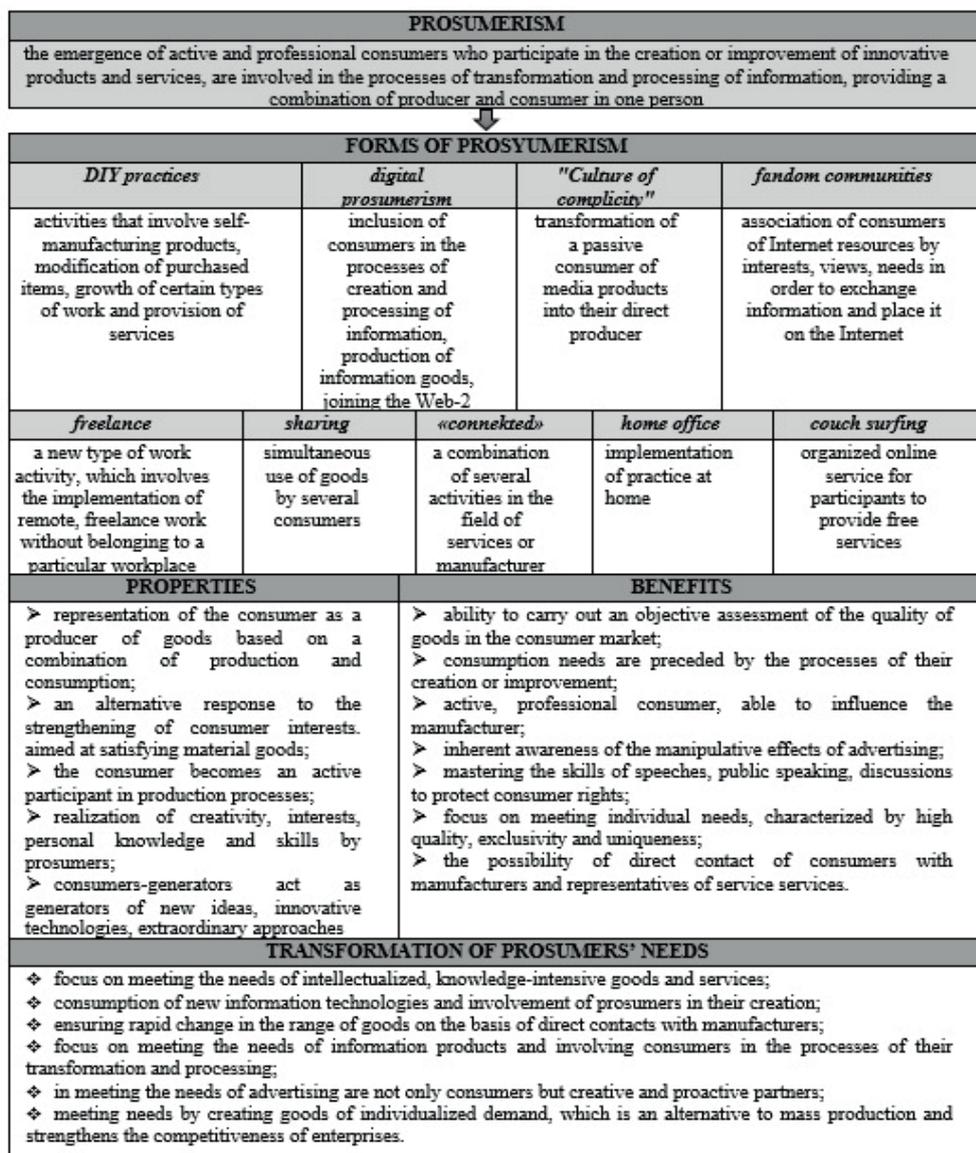


Fig. 3. Prosumerism in the information-network economy

* Source: developed by the author

Thus, the formation of the information society is manifested in the cardinal influence on the transformation of the needs of consumers (see Fig. 3). The impact of information and communication technologies on the social structures of society, financial and economic system, media, worldviews and cultural practices of society as a whole and each person in particular is also monitored (Zaluzhna, 2012).

Thus, the main participants in the information and network economy, which displace traditional consumers-buyers, are prosumers, whose economic behavior significantly bridges the gap between production and consumption. Prosumerism develops both at the level of economic expediency in the context of the creation of material resources and media products, and in the plane of dominance of motives for creative self-creation and self-realization of the creative personality.

In order to produce innovative goods and provide quality services, prosumers organize their own companies, which, transforming into the "prosumer movement", act as a driving force that responds professionally and effectively to all challenges of modern production and marketing activities. And the identified forms of manifestation of prosumerism (DIY - practices, "digital prosumerism", "culture of complicity", fandom communities, freelance, sharing, connection, couch-surfing, etc.) are an expression of creative abilities, creative thinking, individual approach. to the case and the way to form their own lifestyle in the process of realization of individual tastes and preferences, knowledge and skills, hospitality and economy, talent and intelligence.

Conclusions. Services, information and knowledge are recognized as the main factor in the formation of the information society, the center of economic life of which is the consumer. Consumption itself is the dominant factor in the new stage of economic development, which traces the transition from a producer economy to a consumer economy. After all, the implementation of new marketing strategies in the information-network economy creates an urgent need to represent the buyer not as an object of influence and manipulation (consumerism), but a business partner (prosumerism, individualism).

It is in the phenomenon of prosumerism that the production of unique products, diametrically opposed to mass production, is observed, which is manifested by eliminating monotony through the prism of personal creativity, individual tastes and abilities, constant search for new, creating an atmosphere of moral and psychological satisfaction. As a result, in order to create innovative products and provide quality services, prosumers organize their own companies, which, transforming into the "prosumer movement", become a significant force that responds professionally and effectively to all challenges of modern production and marketing activities.

Information and communication space of modern man completely changes the lifestyle, the nature of interpersonal relationships, work and leisure, transforming all the traditional structures of his experience. It is in this context that there is a need for a creative approach to the use of information resources of the Internet media space, the use of skills of conscious perception of the content of information and creative self-realization, which leads to the transformation of passive consumers into active prosumer - producer, author, freelancer.

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DIGITALIZATION OF HR MANAGEMENT AT ENTERPRISES IN THE SERVICE FIELD: TRANSFORMATION OF TECHNOLOGIES AND MODERN CHALLENGES

Iryna Mykolaichuk,

Ph.D. in Economics, Associate Professor,

Alla Rasulova,

Ph.D. in Economics, Associate Professor,

Olga Salimon,

Ph.D. in Economics, Associate Professor,

State University of Trade And Economics, Ukraine

Annotation. *The article substantiates the content, significance and modern trends of innovative changes in the field of personnel management based on the digitization of HR management at enterprises in the service sector. The directions and trends of the implementation of HR digital technologies in recruiting, the formation of qualified personnel potential, training/retraining of personnel were analyzed. The need for digitization of HR technologies and their impact on business competitiveness is substantiated.*

Keywords: *digitization, digital transformation HR-management, HR-digital, digital HR-technologies, digital literacy of the personnel of service organizations, Industry 4.0.*

Formulation of the problem. Transformational processes taking place in the business of the 21st century require new HR approaches and a new business mindset of managers. To manage change processes, HR managers should more actively use new analytical tools in the process of building plans for the future, methods of evaluating the impact and consequences of decisions, optimizing labor productivity, preparing for various scenarios and managing talent - in accordance with corporate strategies. An analytical approach based on the performance of decisions will not only lead to better HR results, but will also facilitate greater support from top managers, who must master the art of solving business cases for effective decision-making. Practical approaches to the management of human resources of foreign and domestic companies are changing rapidly today - thanks to the introduction and application of innovative personnel technologies.

The new technological era is characterized by the blurring of boundaries between physical, biological and digital technologies. In these new realities, digital technologies are the core of the post-industrial innovation economy. The whole range of high technologies in question includes artificial intelligence, unmanned vehicles, 3D printing, nanotechnology, biotechnology and more. The development of new technologies, especially digital ones, is accompanied by systemic changes in all spheres of business, society and politics, as well as the emergence of more modern forms of organization of the work of the authorities, public and private sectors of the economy, which guarantee the transparency of the public environment. Currently, a new generation of digital

economy is rapidly emerging, based mainly on the implementation and use of digital technologies in all its spheres. The term "digital economy" has firmly entered our lives today and is widely used in scientific literature, programs and various government and business documents.

With the beginning of the fourth industrial revolution (Industry 4.0), numerous enterprises began to work according to new requirements in the conditions of ever-increasing competition based on means of automation, the development of artificial intelligence and social networks. First of all, these changes concern the sphere of human resources management (HR-management) and personnel development. With low unemployment in the global labor market, many companies need to take care of training low-skilled or unskilled workers through various growth and training programs. In many economically developed countries, such labor is often replaced by labor force from economically less developed countries, which usually have a high level of unemployment [15]. Therefore, the focus of HR managers' efforts to improve the qualifications of personnel should dynamically change in view of the current situation in the human capital market. Companies realize that their potential success is generated mainly on the search and selection of qualified personnel; there is a renaissance of skills monitoring in the context of the development of the concept of talent management [10]. For example, in the United States, unskilled labor constitutes 47% of all working people. About 60% of working Americans perform tasks, of which up to 30% are already subject to automation [10]. As a result of the fourth industrial revolution, modern organizations will succeed in monitoring, managing and developing personnel competencies, finding a sufficient number of qualified workers for management positions and filling key middle-skilled positions with their own employees based on their transformation from less qualified positions, reducing unskilled labor.

Thus, there is a need for a complex personnel management system with a set of modern digital tools that would quickly adapt and meet the challenges of the digital economy.

Analysis of recent research and publications. The 21st century is a period of innovative technologies and digitalization, in which the transformation of HR management significantly affects changes in human behavior, skills and competencies of organizations as a whole. Technological development makes it possible to optimize business processes and make changes in the content of human work, which in turn can lead to new challenges in changing professional competencies. Studying the development of the human capital market, L. Klaus [10] draws attention to the need to introduce talent management technology to ensure the organization's competitiveness in the context of the fourth industrial revolution. Its main consequences of influencing the transformation of the activities of the HR department, in particular, changes in the nature and organization of work together with the growing availability of data (Big Data), the ability to maintain a strategic function in the era of Industry 4.0, the formation of design thinking as part of organizational culture and an important competence of HR- subdivision, is the subject of research by many scientists.

The rapid pace of technological change has created a gap between employee skills and the changing demands of their roles. G. Bey and G. Sereda examine the issue of accelerating the pace of digital computerization due to modern advances in machine learning (ML) and its impact on employment in various sectors of the economy, and predict likely fundamental consequences [5]. In the works of A. Kolot and O. Gerasimenko, attention is focused on the dynamism of the process of transformations caused by the rapid development of digital technologies and the influence of the new economy, which determines the need to quickly master new trends in the field of work [5]. In their opinion, the rapid development of the digital post-industrial society will stimulate the formation of non-standard employment, therefore, an urgent change in the vectors of socio-economic policy is necessary. V. Zhukovska [3], T. Dlugopolska and Yu. Huk [2] substantiate the directions, problems and key opportunities of digital transformation for HR, analyze the vectors of transformation of HR functions, emphasize strategic changes in personnel management at the stage of transition from traditional to the digital control model [5]. Yu. Sotnikova, G. Nazarova, M. Nazarov, G. Bilokonenko analyze the introduction of digital technologies in the activities of enterprises of different countries of the world using a SWOT analysis of digitization of personnel processes at enterprises [14].

The study of O. Kravchuk, I. Varis, and K. Zaryvnykh [4] is devoted to the justification of the trends and challenges of digitalization of HR management in the context of remote work and remote implementation of labor processes in the conditions of restrictions caused by the COVID-19 pandemic. The authors summarize the possibilities of implementation and the level of development of digital HR technologies, in particular communication robots, social networks, analysis of large data sets, machine learning and cloud technologies.

These and other numerous publications mostly reflect the specific field of application of the system of formation and development of employee qualifications. At the same time, each industry and field of personnel activity has its own characteristics and factors regarding the implementation and development of HR-digital technologies.

Formulation of the problem. The purpose of the article is the theoretical justification of the transformation of HR functions under the influence of digitalization processes; directions of implementation of digital technologies in HR management of enterprises in the service sector.

Presentation of the main research material. Presentation of the main research material. According to Deloitte research, about 63% of surveyed executive directors around the world recognize the use of leading digital technologies as urgently necessary to maintain a competitive position in the market, and 41% are already actively implementing automation in all business processes or making intensive investments in this direction [7]. On the other hand, the processes of adaptation and acceptance of new technologies are complex and take place quite slowly, as they carry not only advantages, but also certain risks, in particular in the field of work.

The World Economic Forum in Davos identified in analytical materials a list of digital technologies that business should use: cloud and mobile technologies, blockchain,

virtualization technologies, identification, artificial intelligence, biometric technologies, augmented reality technologies, additive (3D printing) technologies, etc. They allow you to transfer business processes to a new quality and accelerate the economic growth of enterprises. Digitalization involves a radical change in organizational design, management models and methods, centers of responsibility and is essentially a change in thinking, leadership style, incentive system and adoption of new business models; involves the integration of digital technologies in all areas of business, which leads to qualitative radical changes in the functioning and behavior of the enterprise, is a factor in changes in approaches to doing business [14]. In order to be successful in the new conditions of general digitalization, the heads of organizations need to develop new products/services/solutions using digital tools, provide new types of innovation and creativity in a certain field.

The transition from a traditional "product" company to a technological one, the search for new management models based on the formation of a Digital strategy, forms new trends in the development of service enterprises:

- changes in consumer requests for speed and convenience of purchasing goods/services, checking recommendations, online payment;
- the need for quick decision-making in real time;
- the need to store, process and analyze huge amounts of data (Big Data) and prioritize information security;
- cross-functional work to improve efficiency;
- changes in sales technologies: from a human seller to a robot seller, expansion of distribution channels;
- transition from "target audience" to personalization;
- use of intermediary platforms for the implementation of high-tech business processes;
- digital transformation of business through the use of cloud platforms, services, mobile applications, social networks;
- digital marketing is an integral part of marketing strategy, etc.

The general trends of business development significantly affect the peculiarities of work with personnel, among which the following can be distinguished:

- the company's philosophy – Agility (change in personnel needs regarding the content and working conditions, shifting the balance towards freedom);
- training of freelance personnel (HR is the driver of flexible work organization and forms of employment);
- transformation of the HR function into a business partner (intellectualization to improve efficiency, robotics and cognitive technologies);
- leveling the boundaries of HR management as a separate function: active involvement of functional managers in HR processes and integration of personnel management processes into business processes (decision-making based on the HR system – metrics and analytics in dynamics);
- needs for new HR competencies: automation, robotics, Digital (HiPo

Management) [14].

The specified global trends lead to the formation of a new concept of HR-Digital as a feature of work with personnel and the basis of modern digital technologies with the following characteristics: the need for access to social networks and corporate resources from personal gadgets; social interaction with multimedia capabilities between project participants and 360° feedback with managers; availability of all types of training (online video, audio, courses, presentations) from any digital source; new methods of effective recruitment through chatbots; use and integration of third-party employee and candidate data from social media platforms; use of artificial intelligence and Big Data in talent management, their integration with HR-Digital; mobile applications as the main platforms for HR tools [14].

A study of the work of the personnel of service enterprises showed that the active implementation of changes in HR management preserves their competitiveness on the market and gives them the opportunity to occupy leading positions in their fields of activity. In general, digitalization in HR management has gone through certain evolutionary stages - from personnel management with a predominant accounting function to human capital management with an emphasis on creating a competitive advantage (Fig. 1).

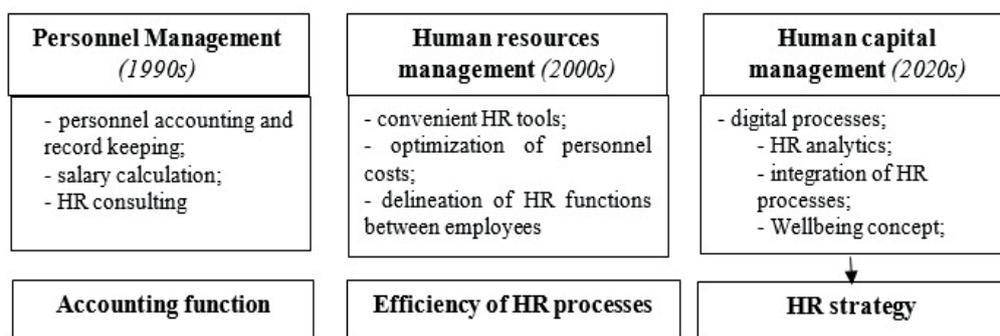


Fig. 1. Transformation of HR functions in service organizations

The business world today is becoming faster, global, mobile and digital. Personnel resources are replenished with a significant number of representatives of the new generation. Young workers are becoming more adept at using the technological tools available, demanding complete freedom of choice about how, where and when they work. In today's digital work environment, almost all technologies that people use to perform work are combined. A digital workplace can include business applications, e-mail, instant messaging, corporate social networks, and virtual meeting tools.

Ukrstat data show that almost every third worker from the total number of employed population is involved in the service sector (trade and repair; transport; accommodation and catering), which indicates a powerful segment of the workforce in the structure of economic activities and a significant contribution to the formation of Ukraine's GDP.

According to the data of the State Statistics Service of Ukraine, every year the number

of economically active population in the service sector is significantly decreasing - for the period 2012-2021, this indicator decreased by 14%. Preservation of the negative dynamics of the economically active population of Ukraine aged 15 to 70 in the future may lead to negative consequences in the social and economic sphere, imbalance in the labor market (Fig. 2). Together with such trends of changes in the number of personnel, there are rapid changes in the digitization of personnel processes, which are affected by the requirements for increasing the level of qualification of the personnel of service enterprises.

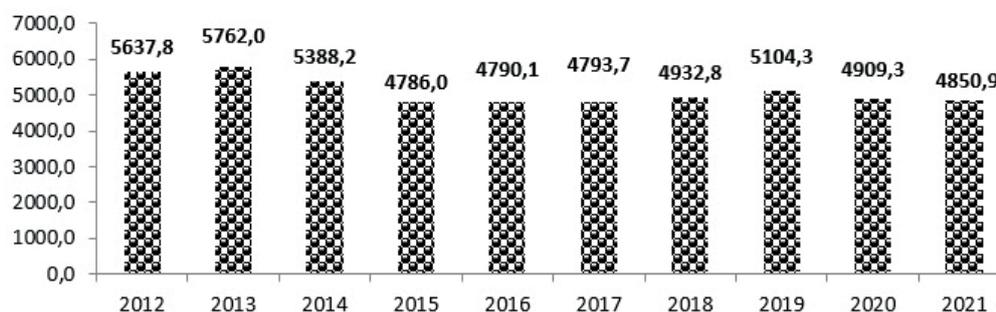


Fig.2. Employed population by economic activities in 2012-2021, thousands of people*

*Data are given excluding the temporarily occupied territories of the Autonomous Republic of Crimea, the city of Sevastopol, from 2015 – also excluding a part of temporarily occupied territories in the Donetsk and Luhansk regions.

According to the research of H. Pisarevska, the benchmarking of companies in the service sector in Ukraine that actively use digital technologies in HR allowed to present the diversity of their practical experience: Uber Technologies Inc.12 – the most fashionable taxi service, which is developing rapidly in the world, uses online as a basis business models both for consumer service through the mobile application of the same name and for managing drivers [8]. S. Matsotsky (Chairman of the Board of IBS) calls the revolution in the human resources management system at Uber "Uberization". The advantage of his business management model is meeting the requirements of people in flexible employment and the ability to work in several places, as well as ensuring the constant development of the business by increasing the staff - attracting people who have free time, implementing the concept of balance between professional and personal life.

Uberclean 13, Qlean14 (on-line apartment cleaning services by ordering services from a mobile device) provides a speed of response and a low, compared to competitors, service cost. In addition to promoting services, the service is also a platform for recruiting.

KFC16 (an international chain of restaurants specializing in chicken dishes) is actively developing the automation and digitization of all HR processes [8]. The company's mass online recruiting is governed by the rule of 5 minutes of action from the

candidate and employee to 1 minute of analysis by the manager. Possibilities of KFC online recruiting:

- automatic accumulation of statistics on the best candidates through social networks;
- formation of a profile of an ideal employee with a conclusion of priority employment conditions for them;
- automated system of registration of employment, accounting of working hours, reporting and calculation of wages;
- online training on a smartphone, development and career management;
- labor productivity management using gamification;
- measurement and improvement of engagement, feedback to management and colleagues.

The Hilton hotel chain annually receives 30,000 applications from applicants for jobs in call centers. At the first stage of selection, artificial intelligence algorithms (AllyO chatbot) carry out an initial selection of the best candidates: the system asks how many hours a day the candidate can devote to work, whether he has access to high-speed Internet, which is necessary for work, etc., and then makes a conclusion about professional suitability of the candidate.

In the second stage of the interview, Hilton uses HireVue's video interview technology, which analyzes how the candidate answers questions and also captures micro-expressions on the face in a fraction of a second. The artificial intelligence system studies all candidates, self-learning and improving its algorithms. These recruitment algorithms reduced the need for recruiters to recruit personnel for the corporation's call centers by 23% [1].

According to McKinsey, the years 2020-2021 were marked by an unprecedented acceleration of digital transformation. The transition to distance learning and remote work due to the Covid-19 pandemic contributed to the development of modern and progressive interactive training practices for a significant number of employees of various professions in the business environment, who had to master digital services for communication and interaction with customers, providers and other stakeholders, switch to electronic document flow and instantly start using task managers [13].

It was found that in Ukraine in 2019, 53% of people had a level of digital literacy below the basic level. Only 28% of citizens could boast of a level of mastery of software higher than basic (working with texts and data in MS Word and MS Excel, editing photos and videos, creating presentations, etc.); 55% had the skills to solve everyday problems - paying utilities and bills, online money transfer, shopping on the Internet and studying, etc.; only 11% were able to recognize false information on the Internet [13]. Lockdowns and the war in Ukraine since February 2022, the expected new restrictions only intensify the trend towards digitalization in various fields of activity, which was observed even before the pandemic, making the changes irreversible.

A survey of many workers in the service sector showed that 42% of Ukrainian managers and 69% of CEOs worldwide plan to reduce office space and transfer part of their employees to remote work. Lifelong learning and the development of digital skills

protect every worker against the coming major technological changes. At the same time, for various reasons, almost half (47%) of Ukrainians aged 18-70 are not interested in acquiring digital skills (laziness to study, fear of digital technologies, high self-esteem, misunderstanding of the concept of "digital literacy", etc.). That is why the Ministry of Digital Transformation of Ukraine published the Digital Competence Framework for Ukrainian citizens, developed with the support of the EU4Digital initiative, created to increase the level of digital competences of Ukrainians and help in the development of state policy and planning of educational initiatives. In fact, this tool is a standard of digital competences, which determines the amount of knowledge, skills and practical skills that citizens need for competitiveness on the Ukrainian and European labor markets and comfortable use of modern technologies.

According to V. McPherson, the following key results can be achieved with the help of digitization of HR management (Fig. 3):

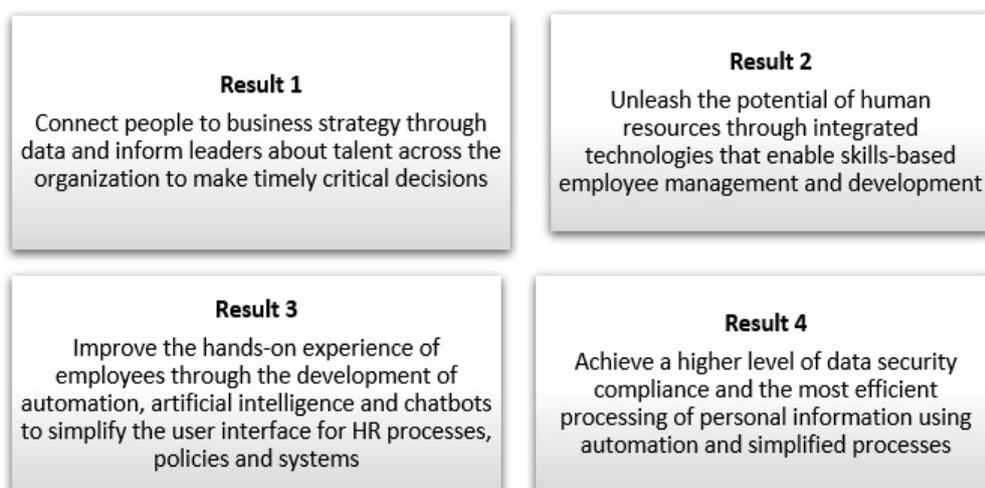


Fig. 3. Key results that can be achieved thanks to digitalization HR processes

HR data plays a critical role in helping leaders navigate changing and challenging times, and HR technology is the key to unlocking its value. Therefore, managers of service organizations need:

1. Have a thorough understanding of talent in the organization through coordinated data, understand its sources, generate insights aligned with business metrics that will help leaders respond to urgent business needs in a dynamic environment.
2. Implement artificial intelligence technologies for effective recruiting, talent development, and training/retraining of staff by building access to and continuously improving a dataset that takes into account when, where, how and what employees learn.
3. To form a competence-based approach to talent management through integrated technologies of retraining of employees in key positions to attract personnel with

the necessary skills to projects, to maintain the competitiveness of the enterprise in a changing business environment.

4. Facilitate robotics and process automation (RPA) that, among other benefits, will be able to perform transactions by manipulating structured or semi-structured data, interact with other systems (office tools, ERP, mainframes, etc.) and trigger actions (send email, call program, etc.). RPA is well suited for collecting personal data by adapting and matching documents, digitizing documents

Digitization of human resources is actively developing. HR professionals use their own career pages, job marketplaces, and most importantly, social networking sites like Facebook and LinkedIn, Facebook, Instagram, and other social media platforms, as well as messaging apps like WhatsApp and Snapchat.

HR managers today have a variety of cross-media skills comparable to marketing agencies. On the other hand, digital recruitment is not an end in itself. It's not about messing around or trying to be seen on as many channels as possible just because that's how things are done today. Recognizing opportunities, avoiding risks, understanding new technologies and applying them purposefully are all part of digital transformation in recruiting.

According to HR specialists, the biggest challenges today for their competences in the field of application of digital technologies in the HR environment are the labor migration of the workforce, which is more than 53% in 2018, the speed of changes and digitalization - 44%, talent attraction - 39%. Every fourth respondent notes the significant impact of technology on the structure of jobs and positions, as well as the ability of teams to work in a multicultural environment. For every fifth respondent, the challenge of time is the question of motivating employees of different age groups. An acute issue for 36% of HR specialists is the outdated perception of HR functions, and 31% of respondents note the lack of involvement of the CEO in HR processes [13].

Digital technologies in the HR environment significantly reduce the labor intensity of the performed operations, speeding up the recruitment process and increasing the productivity of the staff. According to the results of the analysis, the most common types of modern digital HR technologies are:

1. Use of cloud services in the HR environment. In recent years, there has been a significant development in the use of Internet of Things technology, cloud storage and applications. More and more organizations are focusing on "cloud technologies" in the field of HR management. Digitization in the HR sphere involves training, candidate selection, motivation, team building, organization of a healthy work space, etc. As a result, the level of stress in the work space, the need to use smartphones, digital platforms for communication and information exchange is reduced [7].

2. Development of mobile applications. With the help of the mobile HR application "BambooHR", HR managers have more freedom and opportunities to immediately adjust the results. Receiving hundreds or thousands of daily responses, the analytics module is crucial for automated analysis and output of statistical data that can be converted into specialized graphs and charts. For example, integration with software similar to "kaizen"

will allow employees to not just passively answer questions, but to take the initiative and suggest ways in which the company can improve something. An intranet based on Share Point helps employees track the progress of implementation of improvements. A mobile application for receiving feedback creates a dynamic and reliable picture of employee satisfaction with the work performed and benefits HR departments in their daily activities. By taking measures to eliminate inconveniences and not allowing frustration to spread outside the company, HR professionals can show employees that their opinions are taken into account, thus successfully attracting new talent [15].

3. AI (artificial intelligence). Virtual assistants (intelligent bots) – can take on things like answering the most common and frequent questions asked by employees. In large organizations, this significantly saves time, as it leaves more space for important parts of the work. For example, it can be hiring the right people and creating a sense of happiness for employees employed in the company. Thus, artificial intelligence (AI) has its place in the HR field, because technological developments in the field of machine learning and analytics are happening so fast that it is almost impossible to predict what will happen in the near future [13]. In many cases, artificial intelligence (AI) is able to replace humans in repetitive tasks, at the same time as intelligent analytics replaces certain levels of management and influences decision-making. Therefore, companies must ensure the identification of personnel and determine the best way of employment for them [15].

4. Remote work of HR specialists and, as a result, reduction of personnel departments. Video interviews are quickly becoming an integral part of mobile recruiting, thereby providing companies with a wealth of valuable talent. Messengers that recruiters use in their work are Telegram, Viber, WhatsApp, Facebook Messenger and others. This greatly saves the time of the HR recruiting specialist and allows you to be in constant contact with the candidate. The in-house HR system will decrease and outsourcing will increase.

The founder of TechVentive, B. Sommer, states that the transition to downsizing HR departments will be driven by new technologies and increased employee participation in HR processes: a significant number of businesses will seek to gain more opportunities through better technology and self-service.

Elizabeth Brashears, director of Human Capital Consulting at HR TriNet, Barry Hall and Steve Coco of Buck Consultants, believe that the administration's influence will disappear due to increased regulation and the globalization of the workforce. Experts at Buck Consultants point out that service companies using benefit-in-a-box models will offer organizations more cost-effective integrated programs for health care, welfare growth and employee retirement. However, the internal function of HR departments will remain [3].

5. HR is becoming more and more like marketing. Buck Consultants experts claim that HR management aims to develop internal marketing, including coordination of social marketing and brand ownership, i.e. buying "talent from the brand company" [7].

6. Use of communication robots (chat-bots). This technology is especially relevant

at the stage of personnel selection, as it allows interaction with candidates 24/7. With their help, you can track the status of candidates, schedule interviews or calls with them. Ukrainian HR practice has developed methods of using tools for communication robots (Table 1).

Table 1

Communication robots (chat-bots) for automating HR processes in the service sector

Name	Messenger	HR-processes	Opportunities
Gmail Bot	Telegram	Search, recruitment, selection and selection of personnel	Receive email notifications. Increasing the effectiveness of communication with candidates
Plop	Slack	Onboarding and corporate culture	Organization in the format of a game of getting to know the team. Integration with Slack. Such a tool for large companies or the organization of adaptation of newcomers.
Birthday Bot	Slack	Corporate culture	Sending reminder messages about the employee's upcoming birthday; birthday greetings, sending greetings with a gif.
AI Partner	Telegram	All HR-processes	Combination of all HR processes. Convenient sending (for employees) and approval (for HR) of requests for sick leave, vacation and other types of absence. View tasks, information about the company and receive notifications about events: the departure of a new employee, surveys, corporate events.
Demon Kirill	Telegram	Organization of remote work	Helping employees to work effectively during the quarantine period. You can choose to get recommendations on how to organize work at home, arrange a workplace, study or relax. Supports dialogue, tells everything about proper sleep and gives links to online training.

7. Use of social networks. According to the research analyzed, social media is a reliable digital HR tool because it improves the way employers and recruiters find new talent. Despite the fact that they are used to implement several HR tasks (interviews, adaptation, training, etc.), their main role is manifested in the qualitative selection of candidates for vacancies. It has become a popular trend among HR managers to recruit potential candidates through various channels such as LinkedIn, Indeed, Monster, Facebook, etc. Thus, according to research by CleverStaff [25], 92% of recruiters use social networks during recruitment; and it is not just a passive search for employees and placement of ads [4].

Table 2

Areas of application of HR-digital technologies at enterprises in the service sector

Types of HR-digital	Application directions HR-digital
HR-Automation	<ul style="list-style-type: none"> - HR administration, incl. digitization of payment information, simplification of vacation and absence management processes; - administration of benefits as a powerful aspect of employee loyalty to the company, ensuring fair and transparent remuneration; - recruiting: search, submission of applications, evaluation of the pool of applications, selection of candidates for vacancies, onboarding; - staff assessment and attestation; - staff training and development; - creation and implementation of flexible work schedule schemes; - better visibility of schedules and schedule control - evaluation of staff loyalty and involvement; - control over labor costs - monitoring of the company's HR brand
HR-analytics	<p>The use of Big Data and Data mining in the field of personnel management and the transformation of HR data into successful business solutions</p>
HR-marketing	<ul style="list-style-type: none"> - flexible career path; - "internal mobility"; - application of Agile thinking in HR practice; - creation and promotion of an attractive HR brand and HR reputation; - attraction and retention of talented employees; - management of innovative projects and teams; - creation of HR-content strategy; - creation and support of external and internal communications (media, blogs, events, etc.); - work with staff loyalty and involvement; - creation of brand ambassadors: employee blogs; - creation of corporate culture; - corporate content; - non-standard creative in HR brand promotion
Smart-recruiting	<ul style="list-style-type: none"> - robot recruiters; chat bots; - new channels of engagement; - sale of job vacancies – sell job descriptions; - targeted advertising of vacancies; - new tools for evaluating candidates; - internship
Electrical learning	<ul style="list-style-type: none"> - mobile learning; - adaptive learning; - personalized relevant training with effective feedback; - implementation of individual employee development plans; - assessment of training effectiveness; - creation of a developing environment; - application of VR (virtual reality) technologies

HR-gaming	<ul style="list-style-type: none"> - Google Play gameplays; App Store, Game Labs; Zeptolab; Voodoo; Ketchapp Apps etc. for staff training and development; - a motivating tool for high-quality and efficient work of personnel - support of the spirit of competition; - support of communication with consumers; - allows you to attract and supplement the user's intelligence with useful competencies; - relieves psychophysical stress and strain, promotes socialization and communication without spatial limitations
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The main HR processes in which this technology can be implemented are selection, adaptation of personnel and management of corporate culture. For example, such developments as AI Partner from Hurma (allows you to organize communications with personnel for all personnel management processes) and Demon Kyrylo (helps employees work effectively remotely) are especially relevant for maintaining the implementation of HR management processes remotely during the period of quarantine restrictions and after them.

Business is rapidly moving from traditional manual processes to digital models and technologies, combining all management functions and interests of stakeholders: internal (employees) and external (consumers, partners, donors). The result of the digitization of personnel management processes is the transformation into new directions of personnel work, and not the digitization process in itself (Table 2).

Skillsoft's comprehensive digital skills training enables employees to accelerate the company's digital transformation. A digital culture is a must for companies of all sizes and in all industries. With thousands of videos, courses and books, Skillsoft's digital skills offering provides the breadth and depth of knowledge to ensure digital literacy for businesses at all levels.

Conclusions and prospects for further research. The conducted research proved that HR management in the modern conditions of digitalization of the economy is a time-consuming technological process and the directions of changes in the search process and the system of management solutions are unknown to anyone. Today, social networks play a big role in working with personnel. At that time, with the advent of human resources management systems (HRIS), HR managers will increase the speed of information collection and processing, the frequency and speed of decision-making. This will affect the increase in requirements for the competencies of HR managers, the emergence of new specialties such as "big data" analysts, visualizers, statistical data operators, etc. Any human resource management system (HRIS) needs to set up basic and supporting processes from the side of describing and programming the main work processes. This is the main direction of development of HR management and HR professionals. Create more perfect processes, invent and configure tools, find solutions for current and future business tasks. At the same time, the technological era translates HR technologies into a digital format and automates most HR functions through the construction of cloud-based HR platforms with mobile applications (Human Resource Information System (HRIS), which requires the constant development of personnel competencies.

In an era where technological disruption is the norm, digital transformation of HR is as critical as any other aspect of the organization. In addition to digitalization, the transition to a technology-oriented business model requires a change in the culture and philosophy of the organization. Digital transformation is both a method and a result. It's a revolutionary shift, but it's also evolutionary. From small businesses to large corporations, digital transformation is a must. For any firm to remain competitive and relevant in the digital world, it is important to align its goals and strategies with the latest trends and transformations taking place.

The transition to the digital economy significantly transforms all traditional functions of company management, and especially the field of personnel management (human resource management, HRM). In general, the digitalization of HRM has gone through certain evolutionary stages — from personnel management (personnel accounting - payroll - assistance in personnel work) with a predominant accounting function to human capital management (digital processes - HR analytics - integration of HR processes - self-management - service) with an emphasis to create competitive advantages. This is related to the awareness of the economic feasibility of investing in a person, focusing on the development of his abilities and skills. In general, HR plays an important role in the digital transformation of a business, ensuring unity of action and engaging staff to implement change, preventing resistance, improving corporate culture and quality human capital. At the same time, changing and developing due to the same digitalization, based on the introduction of the latest HR technologies, optimization of HR processes.

In general, the digital space is an extremely effective system of socio-economic relations, and digital technologies directly affect its key element - added value. Penetrating many spheres of economic activity, digital transformation projects should stimulate investment, transform traditional industries into efficient, high-tech competitive industries, and also create a number of new opportunities for the realization of human potential.

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PUBLIC ADMINISTRATION

WEBSITES OF PUBLIC AUTHORITIES AS AN INFORMATION SPACE FOR CITIZENS TO OBTAIN PUBLIC INFORMATION

*Oleh Demydkin,
postgraduate student,
Poltava State Agrarian University, Ukraine*

***Annotation.** The article examines the functioning of the websites of public authorities and local governments, the establishment of public communication between government and the public, the need to provide information space for citizens.*

***Keywords:** state authorities, local self-government bodies, public communication, website, information space, state system.*

Building democratic governance in Ukraine, following the example of some European countries, requires a change in approaches to the principles of public service in providing public information, creating an administrative and information space where representatives of all groups can read legal documents, obtain information on strategic development of the city (region), as well as get information about administrative services, learn about the activities of the authorities, all this is a topical issue for the establishment of Ukraine as a democratic state.

Factors such as open access to information and transparency are one of the main principles of a non-corrupt civil service. Currently, the functioning of public administration requires a clear coordinated and consistent action in the implementation of adequate mechanisms of public administration, including e-government. As the experience of European countries shows, it is an effective tool for introducing public communication between the authorities and the population. An indicator of democracy and openness of the state system is the possibility of free access of citizens and businesses to public information and public services.

The aim of the article is to analyze the information space of public authorities, to create a more open and accessible system of public communication.

Reforms of public life and public administration in Ukraine should significantly change both the state system and accelerate the further development of the country in comprehensive areas (social, economic, political, information). In the process of democratic transformations, the citizens and residents of Ukraine, every year get more and more opportunities for their participation in public administration, which makes them equal participants in the state-building process and building "their future".

In this regard, public communication (one or another mechanism for communicating public information to citizens) is very important, both at the national and regional, local levels.

In modern conditions, the websites of state authorities and other state bodies, as well as local self-government bodies are of great importance. Timely, reliable, up-to-date information received from public authorities through their websites can be considered the key to successful interaction of citizens with state and local authorities, in the context of effective resolution of current issues at various levels.

The websites are operated in accordance with the regulations on them and approved by the relevant heads of these public bodies. Let's consider them in more detail, starting with the website of the Verkhovna Rada of Ukraine, which forms the policy of the state, both domestic and foreign [2].

The Order of the Chairman of the Verkhovna Rada of Ukraine [3] approved the Regulations on Web Resources of the Verkhovna Rada of Ukraine and the Procedure for Supporting Web Resources of the Verkhovna Rada of Ukraine. Regulations on web resources have been developed in accordance with the Constitution and legislation of Ukraine. It defines the status of web resources as information resources that provide coverage of the Verkhovna Rada of Ukraine on the Internet, and as an information component of the legislative activity of the Parliament and establishes the procedure for working with them. These include: the website of the Verkhovna Rada of Ukraine, the website of the Chairman of the Verkhovna Rada of Ukraine, the websites of the committees of the Verkhovna Rada of Ukraine and subdivisions of the Staff of the Verkhovna Rada of Ukraine.

This document defines a website - a set of information resources (electronic documents), software and hardware that provide legal entities and individuals with access to information resources and information services of a particular entity at a unique address on the Internet [2].

Web resources of the Verkhovna Rada of Ukraine are the official source of information of the Verkhovna Rada of Ukraine, providing coverage of the Verkhovna Rada of Ukraine, parliamentary bodies and the Verkhovna Rada of Ukraine, facilitating information exchange with other state and local governments, information interaction with governmental and non-governmental organizations other countries, with the public [3].

Information support of the official website of the Verkhovna Rada of Ukraine is provided by the Information Department and the Press Service of the Verkhovna Rada of Ukraine. Information content and maintenance of web resources of the Verkhovna Rada of Ukraine is provided by structural subdivisions of the Verkhovna Rada of Ukraine in accordance with the Procedure for Support of Web Resources of the Verkhovna Rada of Ukraine [3].

Web resources of the Verkhovna Rada of Ukraine are divided by purpose:

- for users of the global Internet;
- for users of the local network of the Verkhovna Rada of Ukraine Intranet.

Web resources of the Verkhovna Rada for users of the global Internet (external users) are provided in the state language and (if necessary) in other languages in accordance with the law [3].

The responsibility for the content of information published on the web resources of

the Verkhovna Rada of Ukraine lies with the unit that publishes it. Feedback is provided by electronic forms of the relevant web resource and is processed by the subdivision of the Verkhovna Rada of Ukraine responsible for the placement of this web resource.

The main information resources of the website of the Verkhovna Rada of Ukraine contain information on:

- bills;
- laws of Ukraine, resolutions of the Verkhovna Rada of Ukraine, international treaties of Ukraine;
- plenary sittings of the Verkhovna Rada of Ukraine and parliamentary hearings;
- structure of the Verkhovna Rada of Ukraine;
- leadership of the Verkhovna Rada of Ukraine;
- Deputy Corps of the Verkhovna Rada of Ukraine (all convocations);
- deputy factions and groups;
- committees and commissions of the Verkhovna Rada of Ukraine;
- activity of committees of the Verkhovna Rada of Ukraine;
- activity of temporary special and temporary investigative commissions of the Verkhovna Rada of Ukraine;
- inter-parliamentary relations;
- conducting an inspection in accordance with the Law of Ukraine "On Purification of Power";
- economic and financial activities of the Verkhovna Rada of Ukraine;
- access to public information;
- the procedure for access of citizens to open plenary sessions of the Verkhovna Rada of Ukraine;
- coverage of the Verkhovna Rada of Ukraine in the media;
- library and bibliographic resources of the Verkhovna Rada of Ukraine;
- activity of the Staff of the Verkhovna Rada of Ukraine, as well as links to web resources of other state authorities, local governments of Ukraine, authorities of other states and photo, audio and video materials covering the activities of the Verkhovna Rada of Ukraine [3].

At the written request of the heads of departments of the Verkhovna Rada of Ukraine, additional information may be posted on the website of the Verkhovna Rada of Ukraine, the coverage of which is justified by the needs of users. Committees of the Verkhovna Rada of Ukraine disseminate information about their activities through the websites of the committees, which are created on the basis of the approved standard website of the Committee [3].

The main information resources of the website of the Committee of the Verkhovna Rada of Ukraine include:

- information on the composition and structure of the Committee, the secretariat of the Committee;
- information on the activities of the Committee (Committee meetings, hearings, round tables and other events in the Committee);

- draft schedule of meetings of the Committee, formed by the chairman of the Committee (posted within one working day);
- the schedule of meetings of the Committee for a two-week period approved at the Committee meeting (placed within one working day);
- changes to the schedule of meetings of the Committee (posted no later than four days before the meeting between the plenary sessions of the Verkhovna Rada of Ukraine and no later than 24 hours - in the plenary period);
- minutes, transcript and audio recording of the Committee meeting (posted within five working days after the meeting, and in case of consideration of draft codes and bills containing more than 100 articles, items - not later than two days before the relevant bill in plenary Verkhovna Rada of Ukraine);
- acts adopted by the Committee (posted within three working days);
- minutes and transcript of the hearing in the Committee (usually posted within 10 days, but not later than 20 days from the date of the hearing);
- information on legislative activity: bills that are under consideration in the Committee and submitted for discussion, the state of consideration of bills;
- conclusions, decisions, explanations, plans and reports of the Committee;
- information on ensuring interaction, feedback with the Committee;
- photo and audio materials covering the activities of the Committee [3].

Placement and updating of information on the web resources of the Verkhovna Rada of Ukraine is provided by responsible officials within the limits of their powers.

Users' access to web resources of the Verkhovna Rada of Ukraine or certain information blocks may be restricted:

- by decision of the Committee of the Verkhovna Rada of Ukraine on the Rules of Procedure, Deputy Ethics and Organization of Work of the Verkhovna Rada of Ukraine - to the website of the Committee;
- by the decision of the Chief of Staff of the Verkhovna Rada of Ukraine - to the website of the structural unit of the Staff of the Verkhovna Rada of Ukraine [3].

The Verkhovna Rada of Ukraine is guided by the Law of Ukraine "On Access to Public Information" [4], the Order of the Chairman of the Verkhovna Rada of Ukraine [5] and the Order of the Chief of Staff of the Verkhovna Rada of Ukraine [6]. The website contains a list of types of information resources that the Office owns and should provide, as well as a section on "electronic petitions", "public discussion of bills" and "e-citizen's office".

It is in the "electronic cabinet" that there is a section "Open Data Portal", which is designed to provide access to public information of the Verkhovna Rada of Ukraine in the form of open data and provides access to information with the possibility of its subsequent free use. The portal was developed in accordance with the Memorandum on Information and Law № 2 (25) / 2018 13 cooperation between the Verkhovna Rada Office, OPORA Civic Network and the State Agency for e-Government with the support of the UN Development Program [2].

Organizing and open coverage of the activities of the state executive power,

obtaining from them reliable information by citizens, the obligation of public authorities and local governments to maintain web pages and prompt (no later than five working days) posting official information about the activities of relevant bodies, is carried out in accordance with the following documents: Decrees of the President of Ukraine [7; 8]; for its implementation of the Resolution of the Cabinet of Ministers of Ukraine [9; 10], which set the task to approve the Procedure for information content and technical support of the Unified web portal of executive bodies, determining the structure and design of websites of bodies, the procedure for providing information and recommendations to local governments to comply with these requirements, defined technical requirements for the creation of official websites relating to access to them for users with visual and hearing impairments; interdepartmental orders [11; 12], which determine the order of information content and organization of the functioning of websites, the order of their monitoring [2].

One of the indicators of information openness of the government, which is subject to a clear quantitative analysis, is the coverage of public authorities of their activities on the Internet, identified 20 types of mandatory information to be posted on the websites of central executive bodies and 26 types to be on the site local authorities.

In recent years, the executive has significantly improved its official websites, but most resources do not yet properly meet the requirements for posting complete and up-to-date information on the activities of the relevant authorities, not tailored to the needs of citizens. Regarding the frequency of updating information, we can observe positive changes, as information is updated quite often, but most often it is not complete enough, in particular, missing or untimely posted new regulations (especially on the websites of regional state administrations), insufficient information on targeted programs.

At the same time, the information openness of public authorities as a whole remains insufficient. It is necessary to achieve a clear implementation of existing laws and regulations, which is difficult without the active influence of society and the constructive work of think tanks and NGOs [3].

As for the websites of local councils, their content, updates and content need to be improved, brought to the requirements of today. Not all councils accepted the recommendations of Government Decree № 1302 [8] on the development of content on its website, which would provide a mechanism for feedback from citizens, fully, timely and objectively provide information about community life, ensure the availability of information on official websites for users with visual and hearing impairments in accordance with the established requirements, as well as as an example - the provisions of the Resolution of the Cabinet of Ministers of Ukraine of 04.01.2002 № 3 on the procedure for publishing information about their activities on the Internet.

The main purpose of the websites of other public authorities, such as the President of Ukraine, the Constitutional Court of Ukraine, the Supreme Court and other courts of Ukraine, the General and other levels of prosecutors of Ukraine, the National Bank of Ukraine, law enforcement agencies, etc., is to publish reliable, comprehensive information about their activities in compliance with the requirements for the preservation of state

and other secrets [2].

Also, in the context of the fight against corruption, in my opinion, it would be appropriate to create an information section of state or local government, which would provide information on the website on the salaries of management and staff, which would be a manifestation of transparency, and in my opinion it would be positively received by the public.

After conducting research, we can conclude that in the current context of public administration reform in Ukraine, as well as local government reform, an increasingly important place in public access to public information is occupied by websites of public authorities and local governments.

New technologies, the stage of digitalization, allow to promptly, objectively, and fully cover for society the effectiveness of public authorities and local governments, provide citizens of different ages with some public information, as well as participate in the management of public and local affairs and thus ensure their constitutional right to participate in governing the state.

However, in contrast to the website of the executive branch, which largely but not fully meets the information needs of citizens, the websites of local governments are at a much lower level, and in my opinion this is due to the lack of a standard, approved "sample" website.

There we can observe heterogeneity in design, multivectorism on each individual site of the local government, incomplete content, which does not allow to meet the information needs of citizens. The described issues require a centralized approach to solving the problem and developing a model website for local governments.

In view of this, the priority tasks of public authorities should be to eliminate inconsistencies in regulations in the information sphere and to harmonize legal norms with each other. Based on the large number and diversity of legal acts governing relations in the information sphere, the issue of codification of information legislation remains reasonable and appropriate, some sections of which should include the rights and responsibilities of man and citizen in the information sphere, rights and responsibilities of the state, participation in the international information space, etc.

Given that the right of citizens to access information under Ukrainian law is divided into a separate category of rights, it is advisable to clearly define the following mechanisms: control over the implementation of this right; appeals against decisions, actions or omissions of public authorities, local governments, associations of citizens, enterprises, institutions, organizations, regardless of ownership, regarding access to information; bringing officials to justice for non-compliance with current legislation governing relations in the field of access to information.

It is especially important to ensure timely updating of public information on the website of public authorities or local governments and provide the subjects of timely, accurate, full information to be disclosed in accordance with the Law of Ukraine "On Access to Public Information» And other regulations. In addition, provide public access to familiarize with the adopted regulations by posting them on the website of the authority.

Conclusions. Today we live in an information society where access to certain information resources are decisive, and the information itself has become product of social production. Freedom of information for the modern Ukrainian society is one of the main needs, because it is in such conditions the right to information becomes very important in the system of rights and freedoms individual. Citizens' access to information about activities of state authorities.

Based on the study, we can conclude that in modern conditions, in the conditions of reforming the state power in Ukraine, reforming local self-government, an increasingly important place in public access to public information is occupied by the website of the state authority and the local authority municipality.

New technologies allow you to communicate quickly, fully and objectively to society issues of efficiency of state and local authorities self-government, to provide citizens with this or that public information, to take citizens participate in the management of state and local affairs and, thus, ensure their constitutional right to participate in the management of the state as a whole.

At the same time, along with a consolidated system of executive websites, which largely meets the information needs of citizens, websites of the authorities local government, in the absence of a template website, "sin" heterogeneity, multivectority, incompleteness of information, and thus do not fully have the ability to meet the information needs of citizens. This requires a centralized approach to addressing this issue and development of an exemplary website for local governments.

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GEOGRAPHY

GARDEN AND PARK LANDSCAPES IN THE TOURIST AND RECREATIONAL ACTIVITIES OF CENTRAL EUROPE

Grygoriy Denysyk,

Doctor of Science (Geography), Professor,

Victoria Kanska,

Ph.D. in Geography, Associate Professor,

Liudmyla Ataman,

Ph.D. in Geography,

Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine,

Iryna Kravtsova,

Ph.D. in Geography, Associate Professor,

Pavlo Tychyna Uman State Pedagogical University, Ukraine,

Alla Kiziun,

Ph.D. in Geography, Associate Professor,

Vinnytsia Trade and Economics Institute, Ukraine

Annotation. *The garden and park landscapes as the objects of recreation and tourism in Central Europe have been investigated in the article. It is noted that Central Europe is a natural-geographical region, which includes the central parts of Europe, which are distinguished by geological and geomorphological structure. As a socio-geographical region, it is a territory that includes countries with an average level of economic development and a socialist past.*

The basis of tourist and recreational activities of any region is the cultural heritage of each country and its peoples. It should be noted that culture is a key resource for tourism, providing interpretation of lifestyles, heritage and identity. Along with the immaterial elements of culture, there are also material ones, which from the point of view of anthropogenic landscape science are revealed through the corresponding groups of man-made landscapes. Garden and park landscapes are a group of man-made landscapes, which is a socio-historical and cultural formation. They are especially interesting objects that promote the development of tourist and recreational activities. These landscape systems are rich in various cultural artifacts, have strong associative, historical aspects and, in our opinion, are the so-called landscape cultural identifiers of the respective regions. At the same time, this group of man-made landscapes, which contains information about the usual and unique features of the natural conditions of the region.

Keywords: *Central Europe, ethno-identifier, garden and park landscape, recreation, tourism.*

The sociosphere of the XXI century is a complex modern landscape system formed by natural shells, which seem to be «stitched» by objects that man uses for his existence and development. To be, humanity is building houses, paving roads, extracting minerals and even trying to go beyond the earthly oikumena. It is interesting that different ethnic groups, depending on their traditions, culture and customs, have different manifestations of saturation of the landscape with certain anthropogenic components. Some ethos's

are characterized by organic incorporation of anthropogenic components into the natural landscape environment, and for others, this environment needs to be radically changed, technicalized and create / organize such man-made landscape systems that are not inherent in the corresponding latitude. Mankind, for some reason, always seeks to break the chorological axiom (although the axiom can neither be violated nor refuted, it is not necessary to prove). Such activities «painfully» affect all components of the landscape, but most of all, still suffers the person himself. The technical, rebuilt, artificial environment is, first of all, uncomfortable for the life and work of an intelligent person. There is a paradox of our existence, man creates it to be comfortable to live and work, and, instead, gets an extremely unreasonable environment for his life and work. Therefore, the organization of a constructive environment in which natural, technical elements aimed at restoring the productive forces of man are suppletively, or at least compensatory, combined with artificial, technical elements is an urgent scientific problem.

Recreation and tourism is a topical area of modern scientific research for both ukrainian and foreign scientists. The works of such scientists are dedicated to them: I.V. Smal, O.M. Kharchenko, V.L. Petranovsky, M.Y. Rutinsky, O.O. Liubitseva, Ye.V. Pankova, V.I. Stafyichuk, O.O. Beidyk, V.I. Novikova, Owsianowska S., Banaszkievicz M., Muhar A., Siegrist D., Widawski K., Wyrzykowski J. and others. Scientists are working to reveal the main issues of tourism geography, conceptual and theoretical foundations of tourist local lore; research of tourist resources, tourist and recreational potential; analysis of the peculiarities of the historical and modern development of tourism and the tourism industry of the world, Ukraine. Problems of man-made landscape studies are developed in the scientific works of G.I. Denisyk and his scientific school, namely: the theoretical and methodological principles of modern man-made landscape science and its scientific directions are substantiated; the relevant classes of man-made landscapes within the relevant natural and administrative regions are studied; geographical features of anthropogenic transformation of landscape systems are clarified; issues of functioning, dynamics and development of man-made landscapes and landscape-technical systems are revealed (Denisyk, 2012).

The purpose of the article is to reveal the functional features of the garden and park landscapes of Central Europe as modern objects of recreation and tourism.

Central Europe as a natural-geographical region is a territory that includes the central parts of Europe, which are separated by geological-geomorphological structure and occupy an intermediate hypsometric position between the highlands of Western and Southern Europe, the Midlands of Northern and Lowlands of Eastern Europe, limited to the «forest formation» of the stretch. Central Europe is formed by the Central European Plain, the Carpathians (including the Danube Plains) and the islands of the North and Baltic Seas adjacent to the Central European Plain (Frisian, Danish, Bornholm, Rügen, Moondzu, etc.). The straits of the Baltic Sea (Skagerrak, Kattegat, Oresund, Hamrarne), the Gulf of Finland, the Neva and Svir rivers, Central Europe is separated from Fennoscandia, and the waters of the North Sea – from the British Isles. In the south, the territory is limited by the Hercynids, the eastern foothills of the Alps and the

Morava, Sava, Danube and Black and Azov Seas. The eastern border of Central Europe runs along the western spurs of the meridional and sublatitudinal chain of hills (Veps, Tikhvin, Valdai, Central Russia, Smolensk-Moscow, Don Range) and the Don River before it flows into the Taganrog Bay. This region is formed at the junction of the Eastern European Precambrian Platform and the Mediterranean Mobile Belt (Hudzevych, 2005).

Central Europe as a socio-geographical region is a territory formed by countries with different levels of socio-economic development and different cultures. As noted by I.V. Smal and O.M. Kharchenko: «They are inhabited by peoples with different ethnogenesis and mentality» (Smal, Kharchenko, 2013). This region includes countries (Czech Republic, Poland, Hungary, Slovakia, Romania, Belarus, Moldova, Ukraine) with an average level of economic development and a socialist past.

The world's first tourist meeting took place in Graz in 1884. It was attended by 107 representatives of Austrian municipalities, who discussed the development of Austrian tourism and concluded that tourism is a promising economic activity. Today, tourism is an active activity that creates experiences for visitors. When tourism is linked to other activities, innovative tourism products are developed. Culture and tourism are interconnected, constantly evolving and complementing each other. Culture is a key resource for tourism, providing interpretation of lifestyles, heritage and identity.

Culture is the basis of tourism development, an important component of the attractiveness of most tourist destinations. At the same time, culture is the main beneficiary of tourism development. The United Nations World Tourism Organization (UNWTO 2001, UNWTO 2018: 15) points to the relationship between culture and tourism and characterizes it as follows: «Culture and tourism have a symbiotic relationship. Arts and crafts, dances, rituals, and legends which are at risk of being forgotten by the younger generation may be revitalized when tourists show a keen interest in them. Monuments and cultural relics may be preserved by using funds generated by tourism. In fact, those monuments and relics which have been abandoned suffer decay from lack of visitation».

Among the many man-made landscapes, cultural heritage is made up of garden and park landscapes. These landscape systems are rich in various cultural artifacts, have strong associative, historical aspects and, in our opinion, are the so-called landscape cultural identifiers of the respective regions. At the same time, this group of man-made landscapes, which contains information about the usual and unique features of the natural conditions of the region.

Garden and park landscapes are a group of man-made landscapes that are formed as a result of human economic activities aimed at meeting material and spiritual needs; in which natural components (rocks, water, air, soil, vegetation, fauna, solar radiation) in combination with small architectural forms and structures, the road-linear network form a harmonious, supple landscape system.

Garden and park landscapes of Central Europe will be considered within the territorial boundaries of the respective states and their cultural features.

Moldova is one of the poorest European countries with troubled Transnistria. However, this country has a rich cultural heritage and landscape diversity. The cultural

symbols of Moldova are Codri, Jok, Cricova, wine, Transnistria, Grigor Ureke, Dmytro Cantemir, Mihai Eminescu, Eugene Doga (Smal, 2011). The garden and park landscapes of Moldova are represented by the following objects: Chisinau Dendrological Garden, Tiraspol Dendrological Garden, Khirbovetsky Park, Pavlovsky Park, lime alley between the villages of Pavlovka and Larga, Kukhuresht Park, Temeleuts Park, Belebenesht Park, Miklesht Park.

Poland is a country of Central Europe, whose territory is located in the zone of seasonally comfortable and subcomfortable weather and climatic conditions. It has a favorable geotourism position: Poland has access to the Baltic Sea; the territory is characterized by landscape diversity: from mountain to plains and wetlands, from natural landscapes to urban and rural landscapes; extensive river network, lakes; Poles are proud of their centuries-old history and culture, which left a powerful material and spiritual heritage, which became the basis for the development of cognitive tourism; the country is located in the center of capacious tourism. Ethno-identifiers of this state are: Vistula, Belovezhskaya Pushcha, Czestochowa, Auschwitz, Krakow, Bigos, wild boar, amber, Goldwasser, Wawel Dragon, Boleslaw pottery, Oscipek cheese, Nicolaus Copernicus, Tadeusz Kosciuszko, Rosa Luxemburg, Rosa Luxemburg Mickiewicz, Frederic Chopin, Jan Matejko, Boleslaw Prus, Henrik Senkiewicz, Maria Skłodowska-Curie, Anna Herman, Lech Walesa, Jerzy Hoffmann (Smal, 2011).

Garden and park landscapes of Poland are represented by the following objects: Muskau Park (on the border of Germany (Bad Muskau, Saxony) and Poland (Lenknica, Zharsky County, Lubusz Voivodeship); Neborow Palace (Neborow, Łowicz County, Łód Voivodeship), Krakow Parks and Poznań Parks.

Garden and park landscape «Arcadia» is located 5 km southeast of the town of Łowicz, Łowicz County, Łód Voivodeship, in the structure of a rural subclass of the residential class of man-made landscapes. Arcadia in the Neborów commune. «Arcadia» is organized within the Mazowieckie-Podlaskie lowland (Nizina Mazowiecko-Podlaska), in the valley of the river Skierniewka, the right tributary of the river Bzura (Vistula basin); in the area of deciduous forests of Central Europe. The Arcadia Landscape Park was founded in 1778 by Princess Helena Przeździecka Radziwiłł. The formation of «Arcadia» took place over 40 years. Architects Simon Gottlieb Zug (Szymon Bogumił Zug), Henryk Ittar, and artists Jan Piotr Norblin (Jean-Pierre Norblin de la Gourdain), Alexander Orłowski. The first small architectural structures were the Sibylla Grotto (1781), the Temple of Diana (1783), the Aqueduct (1784), a stone arch (1784), a Gothic house (1795–1797), the Muğrabi House. (1795), circus and amphitheater (1801) (Lichanski Jakub Z., 2009). In 1785–1789 on the island of Poplar was built a symbolic tombstone of the Duchess with an ambiguous Latin sentence «Et in Arcadia ego» on the model of the Tomb of Jean Jacques Rousseau in Ermenovil. Helena Radziwiłł had collected in «Arcadia» a rich collection of ancient sculptures, copies of ancient works, as well as medieval and Renaissance antiquities, from which she created a kind of museum in the temple of Diana.

Geographical coordinates of the object of study – 52° 05' N, 20° 00' E. The garden

and park landscape has a flat surface, divided by the valley of the Skierniewka River (a tributary of the Bzura River, the Vistula River Basin). The absolute height of the physical surface is 85–96 m. «Arcadia» is extended in the direction from northwest to southeast. The surface is composed of sandy glacial and water-glacial deposits, the valley of the river Skirnevka is swampy. The surface is covered with gray forest soils, broadleaf park plantings. The main tree-forming species of park plantations is the European plane tree. The landscape structure of the Arcadia garden and park landscape is formed by river channel and floodplain-type tracts. The river channel type of localities is represented by the Skirnevka riverbed. The river channel is winding, 2–5 m wide, average depth – 0.5 m, the banks are low, covered with grassy and shrubby vegetation. The river is complicated by the tracts of the pond and the island of Poplar. The floodplain type of areas is represented by tracts of leveled surfaces, composed of alluvial deposits, covered with meadow soils with park plantings with numerous small architectural forms. Garden and park «Arcadia» is an example of a floodplain type of garden and park landscapes. The area of the research object is 14.5 hectares. Today, the garden and park landscape «Arcadia» is part of the museum in Neboriv, which was established in 1945.

Romania is a Danube, Black Sea and Carpathian country, which has a favorable geotourism position: access to the Black Sea, the mountain system of the Carpathians, close geographical location to Western Europe. The ethno-identifiers of this state are: Danube, Carpathians, Dracula, Bran, Maramures, Mamaliga, Tsuyka, Khorezm pottery, vase «gale», Romanian porcelain, Easter eggs, Tudor Vladimirescu, Tristan Tzara, Mircea Eliade, Nicolae Giarescu (Smal, 2011). Garden and park landscapes of this area are represented mainly by national parks. These are: Bucegi Nature Park, Neamt Vinetor, Apusen Mountains, Mechin Mountains, Munchelului – Choklovin Hredges, Danube Delta, Domogled – Valya Cherney, Iron Gate, Kozia, small basin of Braila, Pietra Kraiului, Retezat, Rodna, Semenyshe – Umelyche Bikaza – Hashmash, Ner Gorge – Beushnitsa, Chahleu.

Slovakia is a country with a favorable geotourism position. It is located in the center of the European market of tourist services, has rich landscape and balneological resources, as well as comfortable weather and climatic conditions. In fact, Slovakia is a country in the tourism industry that meets the needs of skiing, balneological and climatotherapy recreation, health and medical treatment. As for its identifiers, they are as follows: Tatras, Morava, Devin Castle, Demanovska Valley, Travnice, Chrpak, Volashki, Fujara, Slivovitz, Tatra Tea, Modra pottery, Oshtepok cheese, Drunkards, Hockey, Alexander Dubcek, Zigmu, Peter Dvorsky (Smal, 2011). The garden and park landscapes of this territory are represented mainly by national parks: Velka Fatra, Mala Fatra, Muranska Polonyna, Low Tatras, Pieniny, Polonyny, Slovak Karst, Slovak Paradise, Tatras.

Hungary is a country of «thermal baths». It is located in close proximity to both Western and Eastern European consumer markets, has favorable natural and cultural-historical preconditions. Cultural identifiers of this state are the Danube, Lake Balaton and Hévíz, Tokay wines, thermal waters, salami, lecho, Rubik's cube, Chardash, Hungaricum, operetta, Icarus, Sandor Petofi, Imre Kalman [9]. Garden and park

landscapes of Hungary are represented by the following objects: the National Botanical Garden (Vazratot), Memenoto Park (Budapest), the Hungarian-Turkish Friendship Park (Sigetvar).

Ukraine is the largest country in Europe, which has rich natural conditions and resources, history of formation and development and, as a result, significant natural and historical and cultural recreational resources. Scientists note that in terms of geotourism, it has the following features: located in favorable climatic conditions; has access to the Black and Azov Seas; the territory is characterized by landscape diversity; rich history and culture, being in the zone of interaction of Catholicism, Orthodoxy and Islam; neighborhood with EU countries. As for ethnic identifiers, they are as follows: Dnieper, Hoverla, chernozem, Sophia of Kyiv, Kyiv-Pechersk, Pochaiv and Sviatohirsk Lavra, Trypillia, Cossack culture, Khortytsia, hopak, oak, viburnum, poppy, sunflower, stork, Chersonese, Kamyana Grave, Chernobyl, borsch, dumplings, embroidered shirt, pysanka, bandura, Kobzar, Shchedrivka, Baturyn, Kruty, Kholodny Yar, Volodymyr Velyky, Oleksandr Dovzhenko, Lina Kostenko, Okean Elzy, plane Mriya, Vitaliy and Volodymyr Klychko, Dynamo, Valery Lobanovsky (Smal, 2011), etc. As for garden and park landscapes, these are numerous objects that form the nature reserve fund of Ukraine, are monuments of architecture and urban planning, etc. Among them, it is worth focusing on the characteristics of the Sofiyivka National Dendrological Park of the National Academy of Sciences of Ukraine.

The park was founded by Polish magnate Stanislaw Szczenny Potocki. Construction began in 1796 under the direction of engineer L. Metzel and continued, alternating with long periods of calm, almost the entire nineteenth century and part of the twentieth century. Today I.S. Kosenko, studying in detail the history of the creation of this garden and park landscape, distinguishes six stages of development of «Sofiyivka»: 1796–1832; 1832–1859; 1859–1929; 1929–1955; 1955–1980; 1980 is our time. At the first stage, the construction was supervised by Captain Engineer Ludwig Metzel. He was ordered to build cascades and waterfalls, plant watersheds, and conduct a significant amount of earthworks. In the first four years, the construction of hydraulic structures was carried out most intensively, underground locks, grottoes, fountains were created, stone boulders were moved and installed in the appropriate order. Local stones were used to create dams, bridges, locks, pedestals for sculpture. Grottoes and waterfalls were created from stones. The underground river Acheron was breached, the oval bed of Lake Acheron was made, the Valley of the Giants was created, and so on. Simultaneously with the movement of stones in the park cleared areas for picturesque lawns, planted deciduous and coniferous trees, ornamental shrubs. Local and exotic species of trees were used in the construction of the park – sycamore, various species of pine, spruce, fir, tulip tree. Bare slopes of beams were planted with local species – oak, linden, maple, hornbeam and ash. Some large exotics were brought from afar and planted in lawns to create finished park compositions. Thus were formed the main arrays of the park called Dubinka, Hrybok and Zvirynets. At the beginning of the 19th century, reservoirs and an island were created, the course of springs was changed, fountains and waterfalls were

built, a greenhouse was built, trees and bushes were planted. Until 1836, the entrance to Sofiyivka was only from the greenhouse.

The park was opened in May 1800 to the birthday of Sophia Glavan-Witt-Potocka. By 1805, the main cascade was created, the underground river Styx (Acheron), locks, stone grottoes, filled with water Upper and Lower Ponds. The park was decorated with marble copies of ancient sculptures, obelisks, decorative vases. Its corners have received a symbolic name associated with ancient mythology, local legends, events of the owner's family. There are no documents that would prove the existence of a general plan for the creation of the park. There is an assumption that the works were planned directly «on the spot», based on the experience of masters, creative intuition of L. Metzel and other engineers, gardeners, artists, as well as by processing unsuccessful details and gradually approaching the ideal model (Bilous, 2001; Kosenko, 2003; Kosenko, Hraban, Mitin, Garbuz, 1990).

Sofiyivka National Dendrological Park of the National Academy of Sciences of Ukraine was established on the territory divided by beams and the valley of the Bagno River with outcrops of crystalline rocks on the day surface, covered with steppe meadows. Initially, S.Sh. Potocki planned to turn the entire Kamyanka river valley with hills and granite cliffs into a large English park equipped with numerous cascades and fountains. It was planned to plant all the surrounding hills with trees with lush leaves, in the open spaces south of the river Umanka, southeast of the village Gorodetsky Uman district of Cherkasy oblast, to create a solid green area, and in the northwest to connect the park with the Greek forest. In the west, it was to start from the city outpost (now the area of the intersection of European and Great Fountain) and continue east to the modern village Pikivets, Uman district, Cherkasy oblast (Bilous, 2001; Kosarevsky, 1961; Kosenko, 2003; Kosenko, Hraban, Mitin, Garbuz, 1990; Kucheriavyi, 2005).

During the following periods the development of the park territory took place, the borders were arranged, the construction of small architectural forms was carried out, the species composition of flora and fauna increased (Kosenko, 2003). Since the opening of the park in May 1802, its area has increased by 118.4 hectares, which is a characteristic feature of this garden and park landscape. «Sofiyivka» is an example of a valley-beam garden-park landscape, the landscape structure of which is formed by tracts of channel, floodplain, slope and watershed types of areas.

During the second period (1832–1859) the park underwent significant changes. Sadova Street was built in 1833, connecting the park with the city, in 1838 the Main Alley was widened and paved, and water was drained from the center of the park to the Main Entrance. In 1844, two Gothic towers were built at the Main Entrance. In 1841 – the Arbor of the Fungus and the Chinese Arbor. From 1842 to 1845, the Flora Pavilion was built according to the design of the architect Rapponet. 1843–1845 – Pink Pavilion on the island of Anti-Circe. After visiting the park in 1847, Tsar Nicholas I rebuilt the entrance towers, the Flora Pavilion and the Pink Pavilion (1850–1852). The Grotto of Apollo was filled up on the terrace of the Moose and the obelisk «Eagle» was

installed. Most researchers point out that the second period of Sofiyivka's development was the main one in the construction of architectural structures. In 1889–1890 V.V Pashkevich laid the arboretum. The area of the park has increased due to the addition of the Grekova Balka tract, where a forest nursery was established. In 1946, the Council of Ministers of the Ukrainian SSR adopted a special resolution on the restoration and improvement of the Uman State Reserve «Sofiyivka». 1 million rubles were allocated for the repair and restoration of the park. In 1948, the master plan for the restoration and development of the Sofiyivka Reserve was approved. 1949 – an ornamental nursery was created on an area of 20 hectares. At this time, work is underway to repair and restore small architectural forms, road-alley system, sculptures of the park; inventory of tree and shrub species. In 1958, according to the resolution of the Cherkasy Regional Council «Sofiyivtsi» 6.19 hectares of land were allocated at the expense of the lands of the Uman City Communal Economy and 9.5 hectares at the expense of the lands of the Uman Agricultural Institute. In 1972, a 5.1 hectare territory formerly owned by a military unit was annexed to Sofiyivka. Since January 23, 1991, Sofiyivka has been granted the status of an independent scientific institution of the National Academy of Sciences of Ukraine. Works on restoration and restoration of park objects, expansion of the territory are carried out. Thus, the modern park occupies part of the Kamyanka river valley, Grekova beam and Zvirynets beam. The current area is 179.2 hectares. The main axis of composition is the valley of the river Kamyanka, which is the focus of all architectural compositions.

The Czech Republic is a country of amazing architectural examples. Its identifiers are Karlovy Vary, Charles Bridge, St. Witt's Cathedral, Moravian Karst, pomegranate, Skoda, Becherovka liqueur, beer, platters, bohemian crystal, Warsaw, polka, hockey, Jan Hus, Jaroslav Hasek (Smal, 2011). The garden and park landscapes of the Czech Republic are represented by the following objects: Waldstein Garden (Prague), Prague Gardens (Prague), Žleb Castle and Park (Žleb), Gluboko nad Vltavou Castle (Prague), Castle and Park Troy (Prague), Konopiště Castle and Garden (Prague), Prague Botanical Garden (Prague), Pruhonice Castle and Park (Prague). It is worth noting that the special garden and park landscapes of the Czech Republic are the castle gardens in the cities of Kromeriz, Telc, Trebon, Cesky Krumlov.

There are seven gardens surrounding the Prague Castle. The Royal Garden is historically the most valuable of them. Originally a Renaissance garden, with some beautiful elements of architecture inspired by Italian influences, it used to be a place, where the king and his family relaxed, played games and raised exotic plants. There is an exceptional Renaissance building the Royal Summer Residence, the Royal Ball Game Hall and some valuable Renaissance and Baroque sculptures and fountains.

The Royal Garden is a garden and park landscape around Prague Castle in Hradčany in Prague. Its area is 3.6 hectares. It is separated from Grad by a reindeer beam. The garden was founded by King Ferdinand I in the Renaissance style in 1534 on the site of medieval vineyards. The garden was designed to grow trees atypical for Central Europe. This is how chestnuts, maples and hazelnuts appeared in Prague.

The Royal Garden is considered one of the first examples of the application of Renaissance principles in the planning of garden and park landscapes. The park was organized at the Castle, in close connection with the dominant building – the Royal Summer Residence of Queen Anne. The unity of architecture and nature was preserved. Regularity and accuracy in planning.

The first work began in 1535, for which Ferdinand I invited the Italian architect Giovanni Spazio. Under his leadership, a wall appeared. Landscaping was to be prepared by the Italian Francesco (Francis Skaryna). Later, Paolo della Stella was invited for this work, and in 1538 he began to build the summer palace of Queen Anne according to all the canons of the Renaissance garden – at the highest point. From the east the relief went down sharply, and in the west there was a flat horizontal surface. Dr. Hugo Vennia from Kotreik was invited to form the garden and laid the foundations of the botanical garden. The decorative elements were created by the Reinhart brothers from Alsace. The garden and park landscape was to be supplemented with sculptures, so Ferdinand I ordered two bronze fountains (one of them singing – located in front of the entrance to the summer palace).

The most important building in the Royal Garden, the Royal Summer Residence, was built between 1538–1563 for Queen Anna Jagiello. Projected by Paolo della Stella and later by Bonifac Wohlmut. In front of the building there is the beautiful Singing Fountain from 1568. Ferdinand I was interested in exotic plants, so there were soon Mediterranean plants such as orange trees, lemon trees and fig trees growing in the garden. In 1570 a special building was built for it. There are only walls preserved of this building nowadays, but figs grow at the place again after years. In 1554, the Royal Garden in Prague was the first place in Europe, where the tulips were growing. It was bought in Turkey, and it became so admired, that it spread to the whole Europe from Prague, and started to be grown in Holland. Ferdinand I also founded the Lion Courtyard in the Royal Garden. It used to be a place for keeping exotic animals. The buildings around the Lion Courtyard were built by Ulrico Aostallis in 1583. Nowadays, there is a restaurant with a special view on the St. Vitus Cathedral.

The successors of Ferdinand I continued with cultivating the garden. Maxmilian II had the Royal Ball Game Hall built there by Bonifac Wohlmut between 1567 and 1569. It was used for sport activities of the Emperor's courtiers, as well as the shooting-range or skittle alley nearby. Various competitions and games were organized here. There is a valuable Baroque Hercules fountain from 1670 by the Royal Ball Game Hall.

Maxmilian II had also new precious plants grown here, so there were such specialities like narcissi or bluebells at the time. The successive Emperor Rudolph II founded a pheasantry in the Royal Garden in 1604. He made an astronomical observatory in the Royal Summer Residence, used by Tycho de Brahe and Johannes Kepler. He had also his favourite lion Mohamed, a present from the Turkish sultan, kept in the Lion Court.

The Royal Garden was seriously damaged during the Thirty Years' War. It was restored in the second half of 17th century by Leopold I, still in the Renaissance style. The Royal Garden was changed in 1740s: it was projected in Baroque style, decorated

with statues by M. B. Braun, and there was a new glasshouse built by K.I. Dienzenhofer. The valuable sculpture *The Night* by M. B. Braun is situated in front of the Royal Ball Game Hall. There used to be a similar sculpture *The Day*, but it was destroyed by Prussians in 1757. The final big change of the Royal Garden came in the 19th century. It became an English park. Today the Royal Garden is accessible to the public, it is only closed during the wintertime.

Thus, garden and park landscapes are objects that combine the natural features of the territory and its cultural features, due to the history of formation and development. Today it is a group of man-made landscapes, which should be considered as an example of the cultural heritage of Central Europe, as well as areas of modern recreation and tourism.

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ANTHROPOGENIC LANDSCAPES OF THE INTERZONAL GEOECOTON «FOREST-STEPPE-STEPPE» OF UKRAINE AS FACTORS OF ITS STEPPIFICATION

Oleksii Sytnyk,

Candidate of Geographical Sciences,

Liubov Bezlatnia,

*Candidate of Geographical Sciences, Associate Professor,
Pavlo Tychyna Uman State Pedagogical University, Ukraine,*

Oksana Valchuk-Orkusha,

Candidate of Geographical Sciences, Associate Professor,

Bohdan Denysyk,

Candidate of Geographical Sciences,

Leonid Stefankov,

lecturer at the Department of Geography,

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Annotation. Knowledge of geocotones of different levels of complexity of their organization, patterns of development, especially in the process of anthropogenization, the ability to control this process is relevant and will help solve some theoretical and many applied problems. Such landscape studies are of particular importance for transition regions, such as interzonal geocotones. It is shown that the interzonal geocotone «forest-steppe» of Ukraine is a representative natural-economic structure for studying the processes of formation and functioning, as well as developing measures for the rational use of natural, natural-anthropogenic and anthropogenic landscape complexes of different hierarchical levels.

It is now almost impossible to determine the natural boundaries of the interzonal geocotone «forest-steppe». They are conditional due to continuous anthropogenization. In the administrative division, it occupies the territory (part or all) of 9 regions, with a total area of 220 thousand km², with a population of about 18 million people.

The influence of anthropogenic factors on the formation of negative natural processes and phenomena that lead to changes in the temperature regime of the interzonal geocotone «forest-steppe» of Ukraine in general and its individual component in particular has been studied. The analysis of temperature over the 60-year period allows us to draw conclusions about the positive empirical linear trend of average annual temperatures in the geocotone and predict the dynamics of rising temperatures in the transition zone of forest-steppe and steppe to the end of the XXI century. The influence of temperature regime on other climatic characteristics, in particular on the amount of precipitation, the reduction of which contributes to the development of aridization of the climate of the interzonal geocotone «forest-steppe» of Ukraine.

Keywords: globalization processes, ecotonization, interzonal geocotone «forest-steppe», anthropogenization, modern landscapes, rational nature management, climate, aridization.

Against the background of global and regional warming, not only air temperature is changing, but also other characteristics: atmospheric circulation, humidity, length of

seasons, drought, etc (Babichenko V. M., Nikolaieva N. V., Hushchyna L. M., 2007) Changes in air temperature determine the dynamics of landscapes, which now can not be characterized as optimal (Morhoch O., 2004).

Given that the research is dominated by general issues of formation of climatic conditions of large areas (Ukraine, some of its regions), the impact on climate and its individual elements of economic activity of people, including rising temperatures and more. Much less attention is paid to local changes in various climatic elements, especially natural in regions where the anthropogenicity of natural landscapes is extremely high: transitional ecotones of zonal and regional levels, including interzonal geocotone «forest-steppe» of Ukraine, or parts thereof.

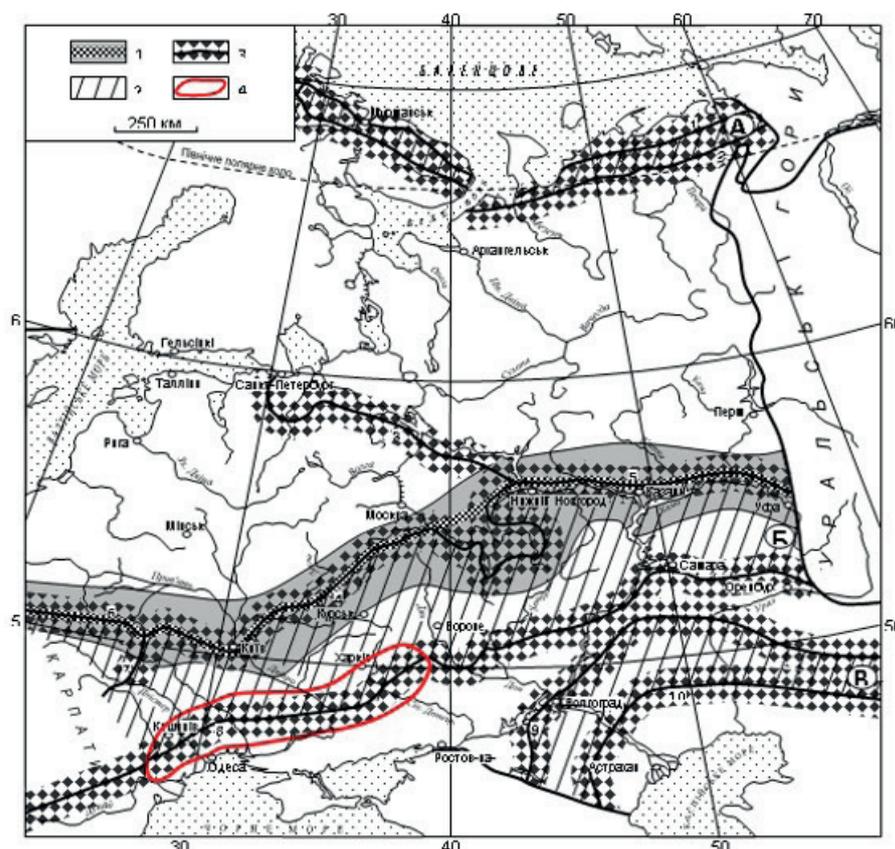
The historical destinies of mankind are most closely connected with geocotones. Many of them played the role of the geographical environment in which new peoples, new cultures, new states were born. It should be noted that there are no special studies, except for some publications that would directly cover the process of geocoton settlement. Due to the use of a number of studies of general historical nature, which include the works of M. Hrushevskiy (Hrushevskiy M., 2007), I. Krypiakivych (Krypiakivych I., 1990), V. Lytvyn (Lytvyn V., 2013), N. Iakovenko (Iakovenko N.M., 1997), it became possible to recreate the complex process of settlement and development of forms of management on the territory of the interzonal geocotone «forest-steppe» of Ukraine. These are fundamental studies of Ukrainian history and geography, which form an idea of the main stages of settlement and development of historical processes in Ukrain.

This transitional strip between the forest-steppe and the steppe, which is bordered on the west and east by two significant waterways, which are the rivers Dniester and Dnieper together with tributaries. Its central part is occupied by the middle part of the Southern Bug River, which has been attractive to humans since ancient times. There were favorable conditions for human habitation and life: the resources of the forest-steppe allowed to provide themselves with food and clothing, and the forest protected from danger; meadow-steppe and steppe areas served as places for housing, fields and livestock. In addition, it should be noted that the interzonal geocotone «forest-steppe» is distinguished by high recreational and aesthetic potential of landscape complexes (Fig. 1).

Only the list of archeological cultures of peoples and tribes that have mastered the interzonal geocotone «forest-steppe», allows us to conclude that it belongs to the regions of ancient and long-term settlement and diverse economic development.

This led to the fact that the modern structure of anthropogenic landscapes of the interzonal geocotone «forest-steppe» of Ukraine began to form only in the second half of the nineteenth century. At the beginning of the XXI century. background in the structure of anthropogenic landscapes of the interzonal geocotone «forest-steppe-steppe» are agricultural (field and meadow-pasture) – occupy 80-85% of the territory; residential and industrial geocomponents and landscape complexes have the strongest influence and rebuild – 2-4%; urban, road and local recreational landscapes have growth prospects. In connection with the full economic development of the interzonal geocotone «forest-steppe» and the replacement of natural landscapes with anthropogenic landscapes, it is

more appropriate to call the interzonal geocotone «forest-field». G.I. Denysyk (Denysyk H. I., 2001).



Geocotones. 1 – I order (main): the middle landscape belt. 2 – II order (zonal): A – forest tundra; B – Forest-steppe; B – Semi-desert. 3 – III order (interzonal): 1) tundra and forest tundra; 2) forest tundra and taiga; 3) taiga and mixed forests; 4) mixed forests and forest-steppe; 5) taiga and forest-steppe; 6) mixed forests and deciduous forests; 7) deciduous forests and forest-steppe; 8) forest-steppe and steppe; 9) steppe and semi-deserts; 10) semi-deserts and deserts. 4 – object of research – interzonal geocotone «forest-steppe» of Ukraine

Fig. 1. Hierarchical system of geocotones of Eastern Europe physical and geographical country

The boundaries that outlined the interzonal geocotone of the forest-steppe and steppe of Ukraine in its natural state can no longer be distinguished due to their complete anthropogenization. Apparently, in their natural state, they repeatedly changed their spatial location, which is partially confirmed by paleolandscape works. (Kunytsa N. A., 2007). Modern conditional-natural boundaries (northern and southern) are determined in accordance with the physical and geographical zoning of Ukraine (Marynych O. M.,

Shyshchenko P.H., 2005). According to this zoning, the geocotone between the forest-steppe and steppe strips includes the southern part of the forest-steppe and the northern steppe with a total area of about 80 thousand km² on the Right Bank of Ukraine and about 140 thousand km² on the Left Bank. The diversity of the landscape structure is due to the location of the interzonal geocotone within 2 subzones, 2 regions, 5 natural areas and 27 districts. In general, the landscape structure is dominated by watersheds of slightly undulating, riparian and ravine-beam areas with appropriate sets of types of tracts. The northern and southern boundaries of the geocotone are conditional. The left-bank section of the interzonal geocotone «forest-steppe-steppe» exceeds the area of the right-bank one, is more difficult to delineate and accordingly has a larger number of physical-geographical areas. This is due to the growing continentality of the climate in the eastern direction and, as a consequence, the expansion of the transition zone from north to south.

Depending on the type of economic activity of people (according to the content), within the interzonal geocotone «forest-steppe» of Ukraine there are eight classes of anthropogenic landscapes: residential, agricultural, beligerative, road, industrial, forest and water anthropogenic, recreational. in anthropogenization of natural landscapes of geocotone and their area (Denysyk H. I., 1998).

Residential landscapes. The special importance of residential landscapes is due to the fact that their appearance within any region leads to the active development of the process of anthropogenic natural and the formation of anthropogenic landscapes. Given the depth of transformation of natural landscapes, most authors divide the class of residential landscapes into two subclasses: urban and rural (Milkov F. N., 1973), there are also well-founded attempts to distinguish three subclasses of residential landscapes: urban, urban and rural (Denysyk H. I., 1998). To resolve this controversial issue, we need reliable historical information about each settlement, its detailed landscape studies, development plans for the future, and so on. As well as characterizing other classes of anthropogenic landscapes, we will consider only the general features of residential landscapes of the interzonal geocotone «forest-steppe» of Ukraine.

Although rural landscapes are among the most ancient, within the interzonal geocotone «forest-steppe» of Ukraine are relatively young anthropogenic landscapes. Their formation and spatial location were influenced by various factors – natural, historical and economic.

Regardless of the period of existence and location of the village is always accompanied by a radical restructuring of the existing natural (natural or anthropogenic) landscape (Denysyk H. I., 1998). Vegetation and related wildlife are the first to change. Significantly changed the surface runoff in the residential landscapes of the geocoton – maximum conservation of precipitation, river water (dams, ditches), intensive use of groundwater – wells, wells and the presence in the villages of water supply, irrigation systems, etc., partially changed and relief: slopes, fill small ravines, depressions, there are quarries, road embankments and excavations.

Qualitative differences in the modern structure of urban landscapes of the interzonal

geocotone «forest-steppe» of Ukraine due to their spatial location, features of the structure of previous natural landscapes, history of formation and architectural and planning decisions of their construction, size and functions inherent in each city. The spatial peculiarity of the urban landscapes of the studied geocotone is that almost 68% of them are concentrated in its eastern part (Industrial Dnieper). These are mainly young urban landscapes, which began to be actively formed only in the second half of the XIX – early XX centuries. For comparison: in the Black Sea region, ancient cities were built from the V-IV centuries. BC, in the central and northern parts of the forest-steppe from the IX-X centuries. Due to the fact that the cities of the interzonal geocotone «forest-steppe» were formed mainly with the development of industry, in their landscape structure in addition to residential, a significant role is played by industrial landscapes (Kryvyi Rih, Dneprodzerzhinsk, Zaporozhye, Marganets, Nikopol and Nikopol). These landscapes, as well as new anthropogenic components – asphalt pavement, various buildings, etc., form a modern image of the cities of the interzonal geocotone «forest-steppe» of Ukraine. At the same time, it should be noted that even in the case of residential and industrial landscape «images» of cities, they do not cease to be part of the nature of the geocotone and continue to develop according to its laws. In the urban landscapes of the interzonal geocotone «forest-steppe».

Agricultural landscapes. From the second half of the XIX century. agricultural (field and meadow-pasture) landscapes are background and form a general «image» of the interzonal geocotone «forest-steppe», and not only Ukraine. Fields of sugar beets, wheat, corn, sunflower, and now rapeseed, soybeans and other crops have been replaced by herbaceous and feathergrass-fescue steppes of geocoton. In general, within the interzonal geocotone «forest-steppe» agricultural landscapes occupy 80-85%. This is the maximum figure not only for the interzonal geocotone, but for Ukraine as a whole. Since the 90s of the twentieth century. the area of agricultural landscapes within the geocotone has not changed significantly; only the ratio of areas between field and meadow-pasture landscapes changes in favor of the latter. However, from the second half of the twentieth century. only agricultural landscapes of the interzonal geocotone «forest-steppe» is the basis for the formation and expansion of residential, industrial, road, forest, water, tafal and recreational landscapes.

According to the nature of the main types of production activities, agricultural landscapes are divided into three subclasses: field, meadow and pasture and garden and plantation (Denysyk H. I., 1998). In the structure of field landscapes of the interzonal geocotone «forest-steppe-steppe» the field and field landscape-engineering systems are clearly distinguished. The functioning of the actual field landscapes is ensured by the annual plowing of the upper layer of the soil, the application of fertilizers and pesticides, as well as the creation of agrophytocenoses. In field landscape engineering systems there is another factor – active engineering structures (mechanisms) that provide appropriate water regime, microclimate and more. Long-term and constant plowing of southern-steppe and northern-steppe soils of geocotone leads to partial or complete cessation of natural formation of soil cover, its gradual change by anthropogenic soils and soil

mixtures. Continuous plowing has intensified the development of unfavorable for the geocotone unfavorable erosion-accumulation processes. Now anthropogenic erosion within the geocotone covers from 35 to 56% of plowed land. Erosion-dried plowed lands bring dust storms from the steppe into the forest-steppe and even Polissya. Erosion processes, especially on the slopes of river valleys and geocoton beams, sometimes determine the spatial location of field landscapes and their contours, the system of protective forest belts, terracing of slopes, etc.

Meadow-pasture landscapes are a characteristic, and in some riparian areas of geocotone and defining, component of agricultural landscapes. Until the 90s of the twentieth century. their areas were constantly declining, now gradually, but steadily, growing mainly due to field landscapes. The presence of meadow and pasture landscapes within the interzonal geocotone has long been supported by cattle grazing and systematic haymaking. Irrigation systems play a significant role in the functioning of meadow and pasture landscapes of the interzonal geocotone «forest-steppe».

Other classes of anthropogenic landscapes in the interzonal geocotone are much less represented. Among them are: anthropogenic forests (3,31%), which are represented by secondary or silvicultural riparian forests, as well as widespread plantations of protective forest belts (3,6%); road (1,3-2,5%), best presented within the eastern part of the geocotone (Industrial Dnieper), as well as beligerative (mounds, shafts, settlements, landfills, abandoned territories of military units, warehouses, etc.) (0,2-0,3%) and recreational (0,4-0,5%). In the areas of large cities (Kryvyi Rih, Ordzhonikidze, Marhanets, Zhovti Vody, etc.), as well as the operation of nuclear power plants (Pivdenoukrainsk), the area and importance of aquatic anthropogenic landscapes – reservoirs and ponds – are growing.

It is clear that historical and political processes have not always contributed to the uniform settlement and economic development of the interzonal geocotone «forest-steppe-steppe» of Ukraine. In some periods, socio-economic development in the geocotone was significantly constrained by its border position on the border of two cultures: nomadic, often militant, devastating in its consequences and settled, agricultural, poorly protected. This led to the fact that the modern structure of anthropogenic landscapes of the interzonal geocotone «forest-steppe» of Ukraine began to form only in the second half of the nineteenth century.

Excessive anthropogenic pressures on the landscapes of the transitional ecotone cause or help the formation of negative natural processes and phenomena, which are manifested, in particular, in changing the temperature of the territory and, as a consequence – the manifestation of aridization and steppe processes.

To determine the dynamics and trends of temperature regime of the interzonal geocotone of the forest-steppe forest-steppe of Ukraine, the temperature analysis for the 60-year period from 1961 to 2020 was conducted, and the climatic norms approved in 2021 for 1991-2020 were used for comparison. The basis of the analysis was the indicators of meteorological stations located within the ecotone and representing the region, as well as in the surrounding area.

Calculated average annual temperatures and average temperatures for certain periods of time (January-February, March-May, June-August, September-November). Defined linear trends (from the English. «Trend» - trend) for the relevant periods.

The analysis of the obtained results showed that a positive empirical linear trend of average annual temperatures is observed within the ecotone territory. The increase in temperature is about 1°C and more, depending on the selected periods.

Statistical analysis of the results of hydrometeorological observations performed within the interzonal geocotone shows that this area is characterized by processes and phenomena similar to the processes and phenomena observed throughout Ukraine.

In general, the fact of global temperature rise is beyond doubt. During the study period, the value of the coefficient of the linear trend for a number of average anomalies of air temperature in general for the territories is from 0.1°C and more than 10 years. The most pronounced trend of rising temperatures is observed in recent years (2000-2019). The increase in the average annual values of air temperature was, in general, due to warming in winter, which can not be compensated by lower temperatures in autumn.

Comparing the trend of temperature increase over time, we can assume that by 2025 the temperature will increase by 1.5 °C, by 2050 - by 2.0 °C, by 2100 - by 2.5 °C, which will inevitably lead to destruction of the dynamic ratio, which consists in the transition zone of forest-steppe and steppe.

Against the background of global and regional warming, not only air temperature changes, but also other characteristics: atmospheric circulation, humidity, length of seasons, drought, etc (Babichenko V. M., Nikolaieva N. V., Hushchyna L. M., 2007).

The distribution of changes in annual precipitation on the territory of Ukraine is not consistent with the seasonal. The regional climate is influenced by large-scale processes, including anthropogenic factors. Considering the age dynamics of precipitation in Ukraine during the XX-XXI centuries. It should be noted that there is no clear trend in precipitation. The change in their annual number is not the same and is in the range of 85-115% of the norm (Sytnyk O.I., 2009).

Given that agriculture is one of the leading sectors of the interzonal geocotone "forest-steppe" of Ukraine, the question arises of determining ways to further its development. Over the last few decades, its development has taken place in conditions of arid climate, which is primarily manifested in the progressive increase in moisture deficit. Its characteristic features are an increase in air temperature, a decrease in precipitation, a decrease in humidity, as well as an increase in the frequency of droughts and dry winds (Sytnyk O. I., 2020).

It is known that arid conditions are formed with the establishment of a stable atmosphere in large areas of the globe. In some regions, droughts are exacerbated by areas of high pressure, cold ocean currents and dry winds, most often occurring in situations of blocking anticyclones, which long disrupt the west-east transfer in mid-latitudes. Quite often the cause of droughts in Ukraine is large-scale invasions of cold Arctic air with its subsequent warming and removal from saturation.

Thus, drought is a characteristic feature of the climate and is manifested within the

interzonal geocotone "forest-steppe" of Ukraine. The rapid development of arid climate in recent decades is characterized by frequent manifestations of severe and moderately arid conditions of the growing season. If in the early 90's of XX century. the territory of the geocoton was characterized by a sufficient level of moisture, in recent years there have been severe drought conditions (SCC did not exceed 1). In the conditions of modern climate change in Ukraine (aridization and warming) there is an actual shift of the boundaries of natural and climatic zones by 100-150 km to the north

(Sytnyk O. I., 2020). The crop industry is sensitive to the new climatic realities within the interzonal geocotone "forest-steppe-steppe" of Ukraine. In addition to traditional crops, farmers are beginning to grow so-called. niche crops (chickpeas, lentils, safflower, sorghum, millet, etc.) with small production volumes, which, however, are characterized by high drought resistance and export capacity.

In addition, the probable consequences of rising temperatures and redistribution of rainfall may also be: 1) changes in the species composition of vegetation; 2) change in the landscape structure of the territory; 3) deformation of the configuration of the boundaries of the interzonal ecotone "forest-steppe" of Ukraine.

Kirovohrad region, occupying the central place of the interzonal geocotone «forest-steppe-steppe» of Ukraine, belongs to the Atlantic-continental climatic region of the temperate zone with slight fluctuations in temperature and increasing continentality from west to east. Despite its relatively small area (24.6 thousand km²), the climatic features of its component, the Gaivoron region, differ from the average values.

Until the beginning of 2021, the climatic norm was used to use the average monthly temperature and precipitation for 1961-1990 (Table 1).

Table 1

Average monthly indicators of temperature, precipitation and relative humidity at the Gaivoron meteorological station for 1961-1990

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
t oC	-5.1	-3.6	1.2	9.1	15.2	18.2	19.5	18.9	14.4	8.3	2.8	-1.6	8.1
Precipitation, mm	38.0	39.0	34.0	41.0	55.0	85.0	85.0	55.0	42.0	28.0	39.0	41.0	582.0

From May 2021, new climatic norms are in force and the average monthly indicators of temperature and precipitation for 1991-2020 are used (Table 2)

Table 2

Average monthly indicators of temperature, precipitation and relative humidity at the Gaivoron meteorological station for 1991-2020

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
t oC	-3.0	-1.6	3.2	10.2	15.9	19.6	21.5	20.7	15.2	9.0	3.5	-1.3	9.4
Precipitation, mm	32.0	29.0	33.0	36.0	52.0	81.0	75.0	49.0	53.0	39.0	50.0	36.0	555.0

Analyzing the thermal regime of the air of the Gaivoron region, it is necessary to

note a wide range of temperature changes. The average temperature in summer (July) in the shade is $+21.5\text{ }^{\circ}\text{C}$, and in some years varies from $+17.4\text{ }^{\circ}\text{C}$ to $+22.0\text{ }^{\circ}\text{C}$, and even up to $+24.4\text{ }^{\circ}\text{C}$.

The weather is changeable, especially in winter. Waves of heat and cold lasting 3-5 (sometimes 15-22) days change 2-5 times a month, and the temperature can deviate significantly from the average perennial for this time of year. The average temperature in winter (January) is $-3.0\text{ }^{\circ}\text{C}$, and in some years varies from $-8.0\text{ }^{\circ}\text{C}$ to $+2.8\text{ }^{\circ}\text{C}$.

According to the observations of the Gaivoron meteorological station, the average temperature in 1961-1990 was $+8.1\text{ }^{\circ}\text{C}$, and during 1950-1959 its indicators were $+8.1\text{ }^{\circ}\text{C}$, in 1960-1969... $+8.1\text{ }^{\circ}\text{C}$, 1970-1979... $+8.0\text{ }^{\circ}\text{C}$, 1980-1989... $+7.8\text{ }^{\circ}\text{C}$, 2000-2009... $+9.6\text{ }^{\circ}\text{C}$, and for 2010-2019... $+10.0\text{ }^{\circ}\text{C}$. Thus, over the past 20 years, there has been a significant increase in average annual temperatures. In general, if we compare the climatic norms set for 1961-1990 and 1991-2020, there is an increase in average annual temperature by $1.3\text{ }^{\circ}\text{C}$.

The average temperatures of the 5 coldest months (November, December, January, February, March) were: in 1950-1959... $-1.7\text{ }^{\circ}\text{C}$, 1960-1969... $-1.5\text{ }^{\circ}\text{C}$, 1970-1979... $-1.4\text{ }^{\circ}\text{C}$, 1980-1989... $-1.5\text{ }^{\circ}\text{C}$, 1990-1999... $-0.4\text{ }^{\circ}\text{C}$, 2000-2009... $+0.4\text{ }^{\circ}\text{C}$, 2010-2019... $-1.3\text{ }^{\circ}\text{C}$, 1991-2020 ... -0.2 . However, we can cite the example of winters when air temperatures were lower than the long-term average.

The average temperatures of the 5 warmest months (May, June, July, August, September) were: in 1950-1959... $+17.8\text{ }^{\circ}\text{C}$, 1960-1969... $+17.5\text{ }^{\circ}\text{C}$, 1970-1979... $+16.5\text{ }^{\circ}\text{C}$, 1980-1989... $+16.9\text{ }^{\circ}\text{C}$, 1990-1999... $+17.4\text{ }^{\circ}\text{C}$, 2000-2009... $+18.4\text{ }^{\circ}\text{C}$, 2010-2019... $+19.1\text{ }^{\circ}\text{C}$, 1991-2020... $+18.6\text{ }^{\circ}\text{C}$.

A characteristic feature of the climate of Haivoron district, as well as Kirovohrad region and a large area of Ukraine is the instability of winter weather. Even in abnormally cold January, there are at least 3 days with a sharp warming. At the end of January, warming is observed more often and in some years at this time there is a steady transition of temperature through $0\text{ }^{\circ}\text{C}$ in the direction of increase, ie meteorological spring. The average temperature in February is rarely close to normal. Frost-free period in Gaivoron district is 275-285 days, the number of days with temperatures above $+5\text{ }^{\circ}\text{C}$ - 220-225 days, and with temperatures above $+10\text{ }^{\circ}\text{C}$ - 175-185 days.

Precipitation is an important characteristic of moisture. They are the main source of replenishment of water and moisture in the soil and their loss is closely related to moisture. An important characteristic of intracontinental moisture is the ratio of external and internal (local) precipitation or the ratio of all precipitation to external, ie the coefficient of moisture. This coefficient shows how many times the moisture brought from outside in the process of moisture circulation falls in the form of precipitation until the atmospheric circulation and river runoff will not take it outside the area. It is obvious that with a small amount of internal precipitation, the coefficient of moisture is close to 1, and with increasing their number - more than 1 of local origin.

The formation and precipitation within the Gaivoron district is a consequence of complex macrocirculatory processes that determine heat and moisture exchange in the

atmosphere. The essence of these processes is the transfer of heat and moisture from the Atlantic and the Mediterranean, as well as the development under the influence of cyclonic activity of large-scale vertical movements that lead to convection of moisture in the troposphere.

In the territory of the Gaivoron region, in accordance with the climatic norm of 1961-1990, an average of 582 mm of precipitation fell per year, but the figures for some years differ significantly. For example, 742.9 mm fell in 1948 alone, 1,013 mm in 1966, 788.6 mm in 1970, 734.7 mm in 1971, 707 mm in 1982, and 826.6 mm in 1991. However, during some years (1950, 1952, 1954, 1957, 1959, 1960, 1968, 1974, 1986, 1992, 1995, 2015) the amount of precipitation was lower than the long-term average. The average figures for 1991-2020 are 555 mm. More precipitation falls in the warm period of the year (April to October) 385 mm, and in November-March - 170 mm. The highest monthly precipitation according to average long-term observations is 85 mm in June and July, the lowest amount of precipitation falls in October - 28 mm. in accordance. The intensity of precipitation has increased especially in recent decades. Meteorological stations Gaivoron recorded 150 days with precipitation in 2008, 158 in 2009, 148 in 2010, and 146 in 2013. The amount of precipitation in excess of 20 mm per day is no longer surprising against the background of recorded indicators - 53.6 mm (June 3, 2007), 57.9 mm (August 30, 2007), 68.6 mm (May 2, 2008), 40.2 mm (June 15, 2010), 47.7 (October 9, 2011).), 65.0 mm (July 24, 2014), 108.2 mm (July 9, 2015), 47.5 mm (January 18, 2018), 59.8 mm (June 4, 2019), 104 mm (June 5, 2014). 2019). Particularly impressive in terms of consequences were high-intensity downpours on June 4-05, 2019, when 59.8 and 104 mm fell in 2 days, respectively, and in June - 212.5 mm.

Comparing the average monthly temperature and precipitation for 1961-1990 and 1990-2019 (Table 2,3), we can identify: 1) a steady trend of increasing temperature during the year and the average annual temperature exceeds the accepted climatic norm by 1.2 oC; 2) indicators of precipitation do not differ significantly, only their intensity and distribution over time changes; 3) increasing the temperature background with a constant amount of precipitation and their uneven precipitation causes a decrease in the coefficient of humidity of the territory.

Table 3

Average monthly indicators of temperature, precipitation and relative humidity at the Gaivoron meteorological station for 1990-2019.

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
t, oC	-3.0	-1.6	3.2	10.0	16.0	19.4	20.9	20.7	15.0	8.5	3.3	-1.4	9.3
Precipitation, mm	30.0	28.6	31.7	37.9	51.0	83.3	76.4	49.4	53.6	37.5	37.8	36.5	554.0
Relative humidity, %	82.0	81.0	71.0	66.0	66.0	67.0	70.0	66.0	73.0	79.0	84.0	85.0	74.0

The temperature and humidity conditions during 2010-2019 are of some concern,

which can be compared with the generalized results of meteorological observations published by the Copernican Climate Change Service, which confirm the warming trend in Europe (Table 4).

Table 4

Average monthly indicators of temperature, precipitation and relative humidity at the Gaivoron meteorological station for 2010-2019

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
t, oC	-3.8	-1.8	3.6	11.1	17.1	20.7	22.0	21.6	16.0	8.7	4.6	-0.3	10.0
Precipitation, mm	45.7	31.3	30.7	35.3	57.8	102.0	71.9	29.3	42.2	40.5	35.2	41.3	563.0
Relative humidity, %	81.0	82.0	66.0	63.0	67.0	62.0	69.0	66.0	70.0	77.0	83.0	85.0	73.0

There is a tendency to reduce soil moisture. The simplest reason is that if the amount of precipitation remains approximately the same, but the temperature rises and evaporation increases. The ratio of precipitation and evaporation, which reflects the coefficient of moisture (aridity), affects natural ecosystems more than the absolute amount of precipitation itself.

Taking into account the average annual temperature indicators, accordingly, the coefficients of humidification of the territory of Haivoron district are determined. Analysis of the results of meteorological observations for 1961-1990, 1990-2019, 2010-2019, 1991-2020, taking into account the average temperature, precipitation, relative humidity and evaporation, showed that the territory of Gaivoronshchyna is located within the subhumid zones of degradation and desertification and is characterized by the coefficients of moisture: 1.2, 1.0, 0.9, 0.9. According to the classification of NM Ivanov, Kzv indicates natural areas: semi-deserts - 0.5; dry steppe - 0.5-0.8; steppe - 0.8-1; forest-steppe - 1-1.2; forest area - more than 1.3. Thus, there is a steady downward trend in the values of the moisture content. Despite the abstract nature of this indicator and the presence of many factors that affect the real humidity of the climate, rainfall and average temperature and humidity are the main indicators, and in general the location of natural areas is really consistent with them. Interestingly, the ratio of precipitation to evaporation, which reflects the moisture content, affects natural ecosystems more than the absolute amount of precipitation itself.

During observations during the 80-90s of the twentieth century. plants typical of the Ukrainian steppe were rare within the region. Among them in particular: meadow clover (*Trifolium pratense*), bruise common (*Echium vulgare* L.), beard ordinary (*Bothriochloa ischaemum*), goose onion (*Gagea minima*), snake onion (*Muscari botryoides*), sand cumin (*Helichrysum arenarium* (L.)), mullein, mullein purple (*Verbascum* l.) – Representatives of these species were found in low-humid, dry areas, in old abandoned sand quarries, on granite slopes covered with forest-like loams. Today, these plants are distributed throughout the Gaivoron region.

Among the representatives of the animal world should be noted the spread of the

tarantula spider (*Lycosa*) (in the 90s of the last century was absent in the area), increased the number of representatives of the steppe (*Scolia hirta*) and the gutted giant (*Megascolia maculata flavifrons*) etc. The lizard is green (*Lacerta viridis*) and copper is common (*Coronella austriaca*) were uncommon, occurring only in the valley of the Southern Bug on granite slopes. Today, both species are distributed throughout the territory.

On the example of the Gaivoron region, it can be argued that the boundaries of natural areas are shifting and, given the trends in temperature changes, it is appropriate to assume the transformation of the study area over time into a dry stepp.

Conclusions. Global climate change and the replacement of forest, forest-steppe and mostly steppe landscapes with field ones have led to significant regional changes in climatic conditions within the interzonal geocotones of Ukraine. Thus, within the interzonal geocotone «forest-steppe-steppe» of Ukraine, over a 60-year period, the annual precipitation trend is mostly negative, and the indicators of relative humidity are declining. The territory of the geocoton is covered by aridization processes. All this leads to the destruction of the unstable dynamic balance of landscapes in the transition zone of forest-steppe and steppe. Probable consequences may be: displacement of the steppe boundary to the north, change in the species composition of vegetation, change in the landscape structure, deformation of the configuration of the boundaries of the interzonal geocotone. Field landscape studies confirm that these processes have already begun.

In turn, the territory of the Haivoron region, part of the interzonal geocotone «forest-steppe-steppe» of Ukraine, according to climatic data, is covered by processes of aridization and desertification. There is a general clear trend of increasing temperature, which can not be compensated by an increase in precipitation for certain periods and, accordingly, a decrease in the humidity. Statistical analysis of hydrometeorological observations shows that the territory is characterized by processes and phenomena similar to the processes and phenomena observed throughout Ukraine: constant uneven precipitation due to manifestations of abnormally wet periods with extremely severe droughts, especially in the last 15 -20 years; the spread of droughts, which were not considered the norm. Thus, the fact of redistribution of average annual rainfall is beyond doubt. The steady decrease in precipitation in the winter-spring period cannot be fully compensated by the increase in their amount in the summer-autumn period, which leads to the destruction of the dynamic ratio that once developed in the transition zone of forest-steppe and steppe. Probable consequences of rising temperatures and redistribution of rainfall may also be: 1) shifting the boundaries of the steppe zone to the north and aridization of the Gaivoronsky region; 2) change in the species composition of vegetation; 3) change in the landscape structure of the territory, etc. Thus, the location of Haivoron district within the interzonal geocotone "forest-steppe" of the Right Bank of Ukraine and relative to the barometric axis of Voeikov, local landscape features contribute to the formation of climatic conditions unique to this area. Their further research is necessary for a more detailed knowledge of the nature of Gaivoron district, rational use of natural resources, solving environmental problems and nature protection.

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PEDAGOGY AND PSYCHOLOGY

CONDITIONS OF EFFICIENCY OF DISTANCE LEARNING IN PRIMARY SCHOOL: THEORETICAL ANALYSIS

Yulia Bilyk,

postgraduate student,

Vinnytsia Mykhailo Kotsiubynskyi State

Pedagogical University, Ukraine

Annotation. *The article considers the issue of organizing distance learning in primary education during the quarantine period in connection with COVID-19. The pandemic has made unexpected adjustments to the educational process in all countries of the world at all levels: from preschool to higher education. Primary school proved to be the most vulnerable during the forced introduction of quarantine restrictions, as the process of digitalization of the educational environment requires from junior students a certain level of information and communication technology. In order for the educational process to be effective, great efforts are needed to establish relationships between teachers, students and parents. An important factor is the readiness of the teacher to organize distance learning.*

Keywords: *international experience, distance learning, digital infrastructure, conditions for the effectiveness of distance learning, training of primary school teachers.*

Introduction. The COVID-19 crisis has forced educators around the world to master and implement a variety of educational technologies. The emergency introduction of distance learning has become a catalyst for digital, communication and technological change that is brewing in the information society. In search of alternative ways of learning in order to ensure the continuity of the educational process, educators around the world in a short time have mastered a number of digital tools, cloud services, mastered new virtual environments, platforms, electronic resources.

The effectiveness of distance education is influenced by many factors, such as personal, communication, social, technological and other factors, the number of participants in the educational process, the type of online platforms, the choice of software, etc. (Toquero, 2020).

Although distance learning has obvious benefits for both teachers and students, such as relevance, flexibility, adaptability and mutual support, cost-effectiveness and interactivity, many teachers have had to adapt and engage all students in online learning in a short time (School Education Gateway, 2020).

Formulation of the problem. Quarantine introduced to prevent the spread of coronavirus is not an exceptional circumstance, as periodic quarantine measures are carried out due to outbreaks of infections in children and youth, as well as climate catastrophes, wars, conflicts, weather conditions, etc., which determines the readiness of

participants process to the organization of distance learning.

According to Bozkurt & Sharma (2020) emergency distance learning or modernized distance education should work with a wide range of professionals, such as psychologists, sociologists, doctors, etc. to develop better and more timely solutions, because during crises on a technological and methodological level. less important is the maintenance of mental and physical health of participants in the educational process.

Research on the introduction of distance learning in primary education is particularly needed, as the forced transition to distance learning has been much more difficult in primary schools than in higher education institutions that have already set up online pre-crisis courses (Mankki, 2021).

An analysis of the scientific and methodological literature showed that teachers from Finland, Estonia, etc. were relatively successful during the forced transition to distance learning.

Analysis of recent research and publications. Features of distance learning in primary school studied: Don Passey (outlined distance learning strategies in primary and secondary school), Martin J. Tomasik, Laura A. Helbling (describes the educational achievements in primary school in Switzerland), Ville Mankki (substantiated the principles of high quality learning in primary school), Eduardo Andere M. (analyzed the reasons for the success of Finnish schools in distance learning during the pandemic), Salmela-Aro K. (described the experience of transition to distance learning and teaching at all levels of education in Finland), S. Petrenko features of the formation of information and communication competence in future primary school teachers in Finland), A. Bessarab (reviewed domestic and foreign (including Finnish) experience in motivating students to distance learning). However, the issue of distance learning in primary education needs further research.

The purpose of the article. The article is devoted to the study of the conditions of effectiveness of distance learning in primary school.

Nowadays, there are a number of synonymous and close in meaning terms, such as "distance education", "distance learning", "online learning", "distance learning", "virtual university" and others. (Ogienko, 2012).

Distance education is different from emergency distance education. Lukkari (2021) uses the term emergency learning or emergency distance learning to distinguish carefully planned and provided with the necessary online learning resources from forced educational situations. The current educational crisis, namely emergency distance learning, should be considered a temporary solution to the immediate problem (Bozkurt & Sharma, 2020).

Distance education is a planned activity, the implementation of which is based on theoretical and practical knowledge that is specific to its nature. On the other hand, emergency distance education is survival in times of crisis with all available offline and online resources. Emergency distance education is a field of distance education, similar to online learning, e-learning or mobile learning (Toquero, 2020).

Bozkurt & Sharma (2020) are wary of calling emergency distance learning distance

education and assuming that online tools are a form of online distance education, as a number of hasty mistakes or failures in emergency distance learning can lead to the result of proving the effectiveness of distance education.

The situation with distance learning during the coronavirus period gave teachers a lot of experience and understanding of the strengths and weaknesses associated with the use of educational technologies. According to teachers, teaching based entirely on technology offers a variety of alternatives to learning, but is not suitable for most students because it requires independence from them. (Valtonen, 2021)

Difficulties in organizing distance learning in primary school can be explained by cognitive, motivational and socio-emotional factors. Primary school students still lack information and communication competence, teachers and parents do not approve of the use of digital technologies in school, teachers lack time, support, digital skills and motivation (Kupiainen, 2020). In addition, the ability of younger students to self-regulate learning is not yet fully developed. Finally, limited physical activity and interaction through distancing, limited access to sports, playgrounds, and parks can be detrimental to primary school children who are vulnerable to pandemic stress and tension. (Tomasik et al. 2020)

Teachers needed to support parents' parents in accessing digital learning, set clear ground rules and expectations when using online platforms to minimize the risk of accessing inappropriate content during online activities (Digital Learning and the Primary School, 2020).

Finland, Sweden, Denmark and the Netherlands, and therefore the most digitalized societies in the world, are among the leading countries in the DESI European Union index. In Finland, the focus is on digitizing primary schools, as high school and vocational students have their own digital devices and digital competences are already more developed (Vuorio et al. 2021). According to the European Information and Research Center of the Verkhovna Rada of Ukraine (2018), before the pandemic in Estonia there were more than 30 educational institutions where you can get a general education through distance learning.

The success of Finnish education, in particular, is largely due to the national education policy, which aims to increase the digital competence of teachers and students and its implementation, which always seeks to recognize problems and overcome them through joint reform and strategy. The Finnish education system is an internationally recognized example of a highly productive system that successfully combines high quality with social cohesion through sound public funding (Lavonen, 2020).

Finland has a strong digital infrastructure, and the Finns are active users of cloud services. According to a study of the level of use of digital capabilities Digibarometer 2021 by countries, Finland ranked second in international comparisons over the past two years using the Internet (Lavonen & Salmela-Aro, 2021).

Thus, the pandemic accelerated the trends of the last century: the need to modernize educational systems, more digitalization and computer literacy, the formation of information and communication competencies of learners, flexible technologies based

on network services, teamwork and focus on student and teacher comfort.

Having affected the education sector worldwide, the crisis has attracted researchers and educators to develop digital pedagogy or DJ pedagogical innovations. Digital pedagogy includes the knowledge and skills needed to use digital tools and platforms or digital environments for teaching and learning, as well as the knowledge and skills needed to organize students' learning in the digital environment. According to Lavonen (2021), digitalization in schools has followed digitalization in life, but schools have outpaced this process.

Studies by Mankki (2021), Lukkari (2021), Öçal, Halmatov & Ata (2021), Dunnick (2013), Vuorio et al. (2021), Rasmitadila et al. (2020) show that high-quality distance learning at the initial level requires compliance with conditions such as:

Motivation. Ferri, Grifoni & Guzzo (2020) argue that the biggest challenges in learning are managing students' motivation and attention. Motivated students are more likely to take an active part in activities, demonstrate increased productivity, perseverance and creativity (Alawamleh, Al-Twait & Al-Saht, 2020). Motivation of students to distance learning is enhanced by clear organization, communication, interaction and teacher presence (Abramenka, 2020). It is necessary to create content, as well as give precise instructions to students through synchronous communication to interact and discuss problems (Ferri, Grifoni & Guzzo, 2020).

High motivation is also important for teachers during distance learning, as the complexity of learning requires teachers to quickly overcome problems in virtual classrooms. The study by Rasmitadila et al. (2020) describe three factors influencing teacher motivation during emergency distance learning: the teacher's mood in online learning, enthusiasm, and responsibilities. These three things are interrelated and determine the success of learning.

Henckel (2007) believes that students should be active participants in distance education. Cooperation between students is needed, as well as active participation of students with classmates and teachers to build an educational community.

Collaboration – the success of many students during the distance period is critical to working closely with their teachers. This condition is achieved by increasing synchronous distance learning, which encourages and provides space for non-formal, non-educational content, teacher-student interaction, and peer communication. Keeping in touch with students and their parents was recognized as one of the main problems for eachers during school closures.

The lack of face-to-face communication between all participants in the educational process has become one of the most important obstacles in the organization of emergency distance learning (Andere, 2021). For this reason, most teachers do not consider distance learning to be an appropriate primary form of education in primary schools. Partly because of the difficulty of interaction, many teachers also found it difficult to reach students and monitor their performance during distance learning (Valtonen, 2021).

Communication is an important part of any learning activity. Students must work with their teacher and their peers to succeed in the academic course.

One of the main and integral features of the online course is the lack of a physical environment that would more naturally stimulate communication. Communication and collaboration are considered to be the most important aspects of meaningful online learning, as well as the most problematic. Due to difficulties, some researchers consider only synchronous or exclusively asynchronous tools, but there is a lack of research on effective tool combinations (Abramenka, 2020).

In primary school, distance learning takes place in the context of teacher-student-parents-teacher. When organizing training using distance learning tools, it is necessary to follow the rules of communication with parents: establishing relationships with them; clear rules of communication; certain channels for communication: e-mails, web conferences, groups on social networks, Viber or other means (Denga & Shirokova, 2021).

Parental support has a great impact on student learning outcomes. Research shows that parents had problems with their children's online learning because they found it difficult to combine responsibilities and motivate students to monitor their performance (Öçal, Halmatov & Ata, 2021, Dunnick 2013).

The second identified characteristic required for distance learning courses is the development of collaboration between participants (Henckell, 2007). Therefore, more attention should be paid to individual support of students, their cooperation with peers (Ahtiainen et al. 2020), the establishment of operational feedback. This means that the teacher must be open to communication with students and parents during working hours, must be well aware of the individual, psychological characteristics of each student, be able to build relationships based on trust and openness.

Finally, distance learning will not go smoothly without the support of colleagues, principals and schools. Without proper support, a teacher who needs to develop learning content may lose confidence and enthusiasm. The introduction of online learning has changed the learning strategy, so support from colleagues, parents, principals and schools is vital to continue the orderly implementation of learning (Rasmitadila et al. 2020).

It is important that teachers and principals work together and support each other, sharing tools and knowledge. In these times, social networks play an important role, creating a space where teachers can meet, share and share their knowledge. Having a support community allows teachers who feel psychologically depressed and need help to cope with the problems posed by the coronavirus pandemic to receive support from colleagues (Digital Learning and the Primary School, 2020).

Planning. The basis of a successful online program is a clear goal. To create a distance learning plan for a school, all stakeholders in the school need to determine the purpose and direction of the program (Dunnick, 2013). Teachers who develop distance learning courses should approach curriculum development and curriculum planning, classroom projects, visual aids, teaching materials, and interact with students and parents to maximize the potential of the environment to be used (Henckell, 2007).

Quality distance learning requires careful and versatile design, in which a rather insignificant role is given to improvisation and spontaneous actions. Distance

education format requires a balanced and detailed plan of teachers' activities, clear and understandable instructions for tasks, allowable maximum load for the appropriate age group of students, thoughtful and appropriate use of hardware, software, online resources, platforms and more.

Experience. The impact of COVID-19 on the online learning process in primary school affects students, parents and teachers themselves. Some of the consequences are that younger students were not previously familiar with distance technology. They are accustomed to being in school, communicating, playing directly with their friends and teachers (Pramana et al. 2021).

Lack of training for junior high school students and teachers teaching their first online course is a major barrier to distance education (Dunnick, 2013). Teachers who do not have experience in online teaching or have difficulty using technology and information tools usually find it difficult to conduct online training because they are forced to master various programs (Rasmitadila et al. 2020).

Another problem that is closely related to the preparation of students is the participation and activity of students in educational activities, which is due to the problems of technical devices and enthusiasm of students to learn (Rasmitadila et al. 2020). This condition is particularly acute in primary education, as the successful implementation of a distance learning program requires that students have basic skills in working with online educational platforms and applications. This issue could be addressed through the prior training of students in school, for example, on the model of blended learning.

1) Prosperity. In addition to the profound global impact of the pandemic on people's social, economic and political lives, the pandemic has also affected people both emotionally and psychologically. Teachers, students and parents found themselves in new and unfamiliar social, psychological and technological conditions. The pandemic was dominated by well-being issues in media circles, and the importance of caring for one's mental, emotional and physical health was re-emphasized. It is important for school leaders, teachers, students and parents to focus on social, personal education, health and physical education (Digital Learning and the Primary School, 2020).

2) Routine - during distance learning it is important to follow the usual schedule of lessons and breaks, daily routine, use the same tools (textbooks, software) that were already used in school before the distance learning period (Mankki, 2021). The school day should be held according to the school schedule with breaks and lunch. Compliance with such requirements brings rhythm and regularity to the day (Opetushallitus, 2021). This approach reduces the level of anxiety, stress, helps to form independence in the performance of daily tasks and is especially important for primary school students, who find it more difficult to adapt to changing learning formats.

3) Control - it is necessary to constantly monitor student attendance, control the implementation of tasks and compliance with the rules of conduct and etiquette during synchronous classes (Mankki, 2021). It is necessary to teach students that distance learning is as important as full-time, and therefore the tasks assigned by the teacher must be submitted on time (before the deadline), in response to regular checks of tasks by

teachers, their evaluation, commenting.

During distance learning, assessment becomes more complex and time consuming. For example, practical subjects are poorly suited for distance learning and therefore difficult to evaluate. The problem of assessment is one of the risk factors when it comes to legal protection of students and the realization of equality in education (Vuorio et al. 2021).

Dunnick (2013) cites examples of the lack of an assessment indicator to determine the effectiveness of distance education, as tasks were often assessed informally by reviewing assessments and non-obvious evidence provided by participants. Distance education programs should be evaluated using official measurable tools, both internally and externally. Both forms of evaluation should use specific measurable indicators and be conducted on a regular basis.

Technologies. Teachers have encountered several problems related to the emergence of obstacles related to technical problems. Not all parents have mobile phones, laptops, high-quality Internet connections, especially in rural areas. When implementing online learning, the availability of a stable Internet connection and technical gadgets is a must for students and teachers (Rasmitadila et al. 2020).

Participants in the educational process must be able to use software, technical devices, be informed about the schedule of the day, receive technological and psychological support (Dunnick, 2013).

It is desirable that all resources for distance learning be limited to one platform or virtual environment. This facilitates the task of making the learning process clear, understandable and accessible to students.

According to a survey conducted by the Institute of Information Technology and Teaching Aids of the National Academy of Pedagogical Sciences of Ukraine, teachers most often use Google Classroom, Microsoft Teams and Moodle to organize work with the class. (Litvinova, 2020). The Class Dojo platform is convenient for use in primary school.

ZOOM, GoogleMeet, Teams, Skype were popular for conducting video conferences at lessons. Primary school teachers most often use LearningApps, Padlet, Kahoot, Google forms, etc. to diversify their forms of work. (Denga & Shirokova, 2021)

Estonia is known worldwide for its technological solutions in governing the country, and the education sector is no exception. Estonia's main tool for distance learning at school closure is the country's existing eKool platform (eSchool), which already has more than 290,000 active users among parents, teachers and students. Also informational and technical support of Estonia according to the information reference of the European Information and Research Center of the Verkhovna Rada of Ukraine (2018) are such services as Blackboard Vista, Moodle, e-Koolikott, Codian video conferencing server, eDidaktikum teacher education environment.

The eKool (eSchool) platform is a school management system that combines home, school and municipality. The system contains educational materials in the electronic environment of eSchool, where all the necessary information, lesson plans, homework, access to which is available around the clock.

The system has the ability to review learning outcomes and absences on a weekly basis, so parents have the opportunity to track information on absences, late students and send a certificate of absence. The electronic school diary displays numerical or verbal assessments and comments of the child, praise and remarks, acknowledgments and thanks, omissions and delays.

The mKool app also allows you to transfer eKool to your smartphone (mSchool provides parents and children with easy access to grades, homework, schedules and school ads optimized for their smartphone).

During the coronavirus pandemic, the main platform for informing parents and primary school students in Finland was the Wilma (Finnish) communication platform. The platform was recommended for feedback and communication with parents, homework, the amount of which can be calculated by the formula: 10 minutes, multiplied by the class number. That is, in the 1st grade – 10 minutes, in the 3rd grade – 30 minutes, etc. The platform is used in Finnish schools not only during quarantine. If a student is absent from class for some reason, he receives an assignment from the teacher through.

Wilma is part of the Visma InSchool student management system, which works to support students, parents and student administration throughout school. Wilma supports student administration in organizing, evaluating, communicating, and collaborating with the school. The platform is used by teachers as a tool for posting assignments, assessing exams and homework. Wilma contains rules of procedure, ie a map of events that are associated with the student account. A useful feature of the platform is that chats can be two-way or shared. Wilma is also used by school staff, management and workplace instructors.

Common virtual learning environments or platforms used in distance learning are Moodle, Google Classrooms, Ville, Teams, O365, Skype and Zoom (Lavonen & Salmela-Aro, 2021). Pedanet and LukiMat services are also popular.

Thus, the most important aspect of the policy is the continuation of quality teacher education. Researchers Darling-Hammond (2020) argue that investing in high-quality teacher education, transforming teacher training opportunities to meet current and future needs, supporting mentoring and developing new teachers, and providing time for educators to cooperation with each other and key partners are extremely important (Lavonen & Salmela-Aro, 2021). Quality distance education requires structured and thoughtful planning, special teaching methods, communication and other technologies (Burns, 2011).

Conclusions. Thus, we can identify the main conditions for a successful transition to distance learning, both emergency and planned: a high level of preparation of teachers for innovation and the formation of information and communication competencies and digital skills; development of digital infrastructure at the state level, modernization of material and technical base; observance by teachers of conditions of the organization of distance learning: support of cooperation with pupils and parents, careful planning of all aspects of employment in an online format, observance of routine norms and control of success, attendance, behavior; choosing a user-friendly virtual environment, platform or

developing a nationwide application; provision of technical resources for teachers and students.

To develop and improve the organization of distance learning at the primary level of education in Ukraine, it is necessary to prioritize the creation of quality distance education, building methods of using distance technology at different levels of education and training future teachers in digital technology.

Further research in the field of distance learning is relevant and promising at the present stage of development of education in Ukraine. The issue of developing methodological and practical elements of the system of training primary school teachers for the organization of distance learning remains open.

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LEGAL CULTURAL TENDENCIES OF EDUCATORS IN THE POSTMODERN SPACE

*Marine Doroshchuk,
postgraduate student,*

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Annotation. *The article examines the meaning, concept, content of legal awareness in the socio-political development of a person. An analysis of the importance of factors affecting the level of legal awareness of citizens is carried out. A forecast assessment of the expected level of legal awareness for the next five years is given, measures to increase it are determined. It is proposed to use the category of legal awareness as an indicator of socio-political development of a legal democratic state.*

Legal consciousness is one of the most important forms of human and social consciousness, along with political consciousness, morality, art, religion, science, and philosophy. This is an objectively existing set of interconnected ideas, emotions, views that reflect criticism of the current law, the attitude of public groups and individuals to the law as an integral social institution, its system and structure, individual laws and other elements of the legal system. Law is impossible without developed public legal awareness, and without law there is no legal democratic state.

The assessment of the importance of factors affecting the level of legal awareness of an individual by different categories of participants in the educational process in humanitarian higher education shows that, according to the students, the most significant are the level of legal activity, motivation for legal activity, spiritual, professional and legal culture. Scientific and pedagogical workers removed motivation for legal activity and legal activism from the top five most important factors influencing legal awareness and added the level of education and the general culture of the individual.

Keywords: *legal culture, legal awareness of an individual, formation of a legal democratic state, value-legal orientations, assessment of the importance of factors affecting the level of legal awareness of an individual.*

Introduction. The state of the legal culture of Ukrainian society reflects the complex process of modernization in the country's civilizational development. In modern jurisprudence, the problem of the development of subcultures, in particular youth culture, remains unsolved. Therefore, the study of the processes of formation and functioning of the legal culture of students, its connection with the reformation of society is of particular importance. The relevance of the problem of forming the legal culture of students is enhanced by the fact that the pragmatization of life, neglect of legal, moral, and social norms lead to the destruction of established spiritual values.

The majority of young people do not know how to communicate kindly with each other, and any non-standard situation causes conflict, stress, and manifestations of deviant behavior. There is a lack of understanding by students of the essence of social processes and phenomena, which leads to stressful situations, conflicts, and inadequate social behavior. Therefore, in our opinion, the issue of legal education of students is relevant, in particular with: the need to educate citizens in the spirit of active participation

in the formation of the rule of law and law-abidingness, providing students with legal information about current legislation and the practice of its application; prevention of offenses committed on the basis of legal nihilism, cynicism and immorality; the formation of a European-type legal culture that will enable citizens to integrate into the European and global legal space to realize their private and public interests.

For the participants of the educational process of a higher educational institution, the issues of renewing approaches to the formation of the legal culture of education seekers, ensuring the quality of legal educational work, solving the above-mentioned problems in order to overcome legal nihilism among students, observing universal human values and the spiritual, moral and cultural foundations of the life of the Ukrainian people and construction of the legal state.

The purpose of the article is a comprehensive theoretical analysis of the legal culture of education recipients, which involves revealing its content, purpose, general laws and features of formation in the process of modernization of Ukrainian society in the international arena of legal relations. The main hypothesis consists in the assumed dependence of legal awareness and legal culture on a set of factors of social existence, legal views, ideas, ideas, feelings, value orientations that are formed in the field of legal behavior of an individual.

Modern literature presents different opinions regarding the definition of the concept of "legal culture". The concept and content of legal culture was most widely disclosed by Professor O. Kyrychok (who defines legal culture as a historical experience that affects the behavior of social groups and individuals in the field of law, reflecting the qualitative state of the legal life of society, which is reflected in the achieved level of legal activity, in the level of perfection of legal acts; the degree of legal awareness and legal development of the individual; the degree of personal freedom and responsibility of the state and the individual; at the level of the positive influence of law on social relations and their regulation; embraces and unites all other elements of the legal system (Kyrychok, 2010).

The Great Explanatory Dictionary of the Modern Ukrainian Language states that "legal culture of students" is a combination of intellectual-volitional and moral-psychological integrated components that interact in a coordinated manner and are manifested in legal awareness, understanding and feelings, skills and habits that regulate one's own behavior in determining legitimate goal, legitimate ways and means of its achievement, justice, impatience with offenses, responsibility, perceived need for legal self-education. As a multidimensional, systemic and dynamic personal formation, legal culture of students is a set of legal knowledge, attitude to law as a value and lawful behavior; as a socio-pedagogical phenomenon - it is studied as a measure and method of creative self-realization of a person in the legal regulation of his future professional activity.

The issue of the legal culture of education seekers is becoming more and more practical. Legal culture in a practical aspect is necessary for the future specialist in order for him to navigate well in the "new world", to find the right way out of the situation in which he increasingly finds himself due to the lack of basic legal literacy, to know his

rights and obligations well, and to be able to implement them and effectively defend with the help of legal means; that he knows and respects the rights and obligations of his counterparties - citizens, labor groups, state or public bodies, officials, and knows how to competently solve the tasks of practical behavior in the legal sphere. Legal training, formation of the legal culture of students - future specialists becomes an important state task. Educational institutions of all levels bear a great responsibility for the formation of competent specialists, their socio-legal readiness for life in civil society.

Studying at a higher education institution forms in the future specialist a cognitive attitude to legal values, a sense of respect for the law, a conviction of the need and social significance of strengthening the legal basis of state and public life. In turn, the above is a prerequisite for the further development of the students' need to observe, implement and use legal norms, a necessary condition for the formation of a value-legal orientation towards legitimate socially significant behavior.

The values of the legal cultural complex act not directly, but indirectly through the formation of information about the totality of one's rights and obligations, methods of their implementation, the need for psychological and pedagogical preparation for legal education, convictions in the expediency of socially significant behavior, in the motivation of socially significant lawful behavior of students. that is, through the former social-psychological qualities of students.

Research methods. In accordance with the defined goal, the research was based on the analysis of international and national legislation, the database of scientific research developments of the National Library of Ukraine named after V. I. Vernadskyi, the study of authored scientific works and professional publications on the issues of the formation of human consciousness, legal consciousness and legal culture of young people, in particular, student. Research methods include bibliographic, linguistic, comparative, substantive and legal analysis.

Theoretical foundations of research. The basic link of society is a person as a biological individual, which is characterized by such mental formations as mind, consciousness and will. These qualities provide an opportunity to critically perceive the surrounding existence, to realize and determine one's place in society, to program one's perspective and direct one's actions according to a defined goal. A specific form of consciousness is legal consciousness (legal consciousness) – a system of reflecting legal reality in views, theories, concepts, feelings, ideas of people about law, its place and role in ensuring personal freedom and other universal values. The level of assimilation by members of society of legal values (legal norms and principles, skills of lawful behavior, respect for the law, etc.), the degree of their mastery and practical implementation in life is legal culture, which is a component of the general culture of both society as a whole and its individual member, which demonstrates the level of legal awareness and legal activity of the society.

The UN General Assembly stated in the Universal Declaration of Human Rights that the free and full development of a person is possible only in society. The basic link of society is a person as a biological individual, which is characterized by such mental

formations as mind, consciousness and will. The mentioned qualities provide her with the opportunity to critically perceive the surrounding existence, to realize and determine her place in society, to program her perspective and to direct her actions according to a defined goal. Human consciousness governs the behavior of people, regulates their actions in all spheres of life, which is manifested in the ability not only to know the world, but also to be aware of it, to fill it with meaning and subjective meaning, to reconcile the acquired knowledge with the goals of one's own existence. Two forms of consciousness are distinguished – individual and social. A specific form of consciousness is legal consciousness (legal consciousness) – a system of reflecting legal reality in views, theories, concepts, feelings, ideas of people about law, its place and role in ensuring personal freedom and other universal values. According to the degree of generalization, it is customary to differentiate legal awareness into individual, group and public.

Understanding legal awareness and the psychological mechanism of its formation is important for their adjustment in accordance with the specific conditions of life in society. This becomes especially important in the conditions of the reforming activity of the state, which leads to changes in the system of social relations, legislation, organization and management of the state mechanism. And this requires the assimilation of new rules of behavior, their evaluation, the development of a positive attitude towards innovations and, accordingly, the attitude towards lawful behavior. And therefore, real changes in the state, legal and social life are possible only when a person's mental constitution is changed on the basis of knowledge of the principles of individual psychology of a person, the mechanism of formation of his legal consciousness and the use of this knowledge for such transformations.

The individual level of consideration of legal awareness makes it possible to identify the causes of internal contradictions, external collisions and conflicts, to determine ways to eliminate them and, on this basis, to develop a mechanism for lawful behavior.

Methodology of pedagogical experiment. The research was carried out on the basis of Mykhailo Kotsiubynskyi State University of Vinnytsia and the Communal Institution of Higher Education "Vinnytsia Academy of Continuing Education" (Vinnytsia). 288 people took part in the experimental study, including 101 students, 97 teachers, 90 managers on practice bases, including 78 stakeholders who ensure the employment of future specialists, taking into account their professional experience: at the beginning of training, during training and practice. The sample of subjects was the category of persons aged 17-64 years. The experiment was conducted according to the decision of the Communal Institution of Higher Education "Vinnytsia Academy of Continuing Education" at the Department of Psychology (protocol № 2 dated September 23, 2021). The ethical rights of all participants were respected. The study was conducted in the natural conditions of the educational process of higher education institutions, with the provision of general conditions for participation in the experiment: the same time and duration of study, the same measuring materials, which allow diagnosing the level of legal awareness according to the criteria for evaluating the competence of legal protection.

In order to assess the degree of significance of factors affecting the level of legal

awareness of an individual, a study was carried out, within the framework of which a specially developed questionnaire suggested ranking 11 factors by importance: level of education, length of work by profession, mentality of the country, general culture, a person's ability to work, his social status, level of spiritual, professional and legal culture, motivation for legal activity, legal activity of the individual (Table 1).

Institutes for the formation of students' legal awareness are the family, school, higher educational institutions, social groups, labor groups, mass media, Internet support, etc.

The results. The analysis shows the heterogeneity of the assessment of the importance of factors affecting the level of legal awareness on the part of trainees of the vocational guidance department, students and scientific and pedagogical workers of humanitarian higher education institutions. Thus, the number one factor in terms of influence on the level of legal awareness is legal activism, and students and scientific and pedagogical staff of departments of legal disciplines consider legal culture, which reflects the level of achievements in the field of legal behavior of an individual, to be the number one factor in terms of influence on the level of legal awareness.

Table 1

Rank assessment of the importance of factors affecting the level of legal awareness of an individual ($\bar{x} \pm S_x$), ranks*

Name factors	Ranking assessment of the importance of factors		
	Stakeholders	Education seekers	Scientific and pedagogical employees of ZVO
Educational level	3,92+0,09	3,87+0,09	2,12+0,09
The mentality of the country	4,18+0,06	5,12+0,06	4,92+0,06
Social status of a citizen	4,26+0,08	4,12+0,08	4,18+0,08
Legal activism	2,18+0,12	2,96+0,11	3,18+0,10
Spiritual culture	3,02+0,06	2,17+0,05	2,21+0,06
Legal culture	3,14+0,08	2,02+0,07	2,06+0,08
Professional culture	3,09+0,12	2,26+0,11	2,18+0,10
General culture	3,94+0,08	3,82+0,08	2,64+0,09
Efficiency	3,18+0,09	4,56+0,08	4,02+0,09
Motivation for legal activity	2,92+0,13	3,18+0,14	3,02+0,13
Time of work in the specialty	3,96+0,04	4,23+0,05	2,97+0,04

* the lower the rank, the more important the factor under consideration

In addition to the factors mentioned above, the top five most important factors in terms of impact on legal awareness also include: according to the students of the career

guidance department – motivation for legal activity (2,92), spiritual (3,02), professional (3,09) and legal culture (3,14). In turn, students identified spirituality (2,17), professional culture (2,26), legal activity (2,96), and motivation for legal activity (3,18) as the five most important factors. The scientific and pedagogical staff of the departments of legal disciplines attributed to the most important factors capable of influencing the level of legal awareness of citizens: education (2,12), professional (2,18), spiritual (2,21) and general culture (2,64). That is, the synthesis of various types of cultures was singled out as a background. A comparison with the five most important factors affecting the level of legal awareness of citizens as assessed by different categories of participants in the educational process shows the identity of the assessments by students and trainees, while scientific and pedagogical workers removed motivation for legal activity and legal activity from the first five. Instead of these factors, they proposed the general culture of the individual and the level of education as important factors.

During the research, it was proved that the formation and improvement of legal consciousness and legal culture are needed by student youth as the main carriers of the nation's intellectual and physical potential. The issue of the formation of legal awareness and legal culture of students is of particular importance, this category of youth should be formed not only by highly qualified professionals, but what is no less important, highly moral, highly cultured and law-abiding citizens - the real elite of a civilized, democratic society, as proclaimed by the Constitution of Ukraine.

Discussion. According to V. Golovchenko & A. Potomkin, there is a mediating link between the legal culture of society and the culture of the future specialist - the cultural environment, which includes elements with which this individual interacts and which influence his activities of assimilation and creation of cultural values, on spiritual needs, interests and value orientations, for socialization and spiritual development of the individual. The legal culture of the university staff is precisely such an environment where the legal culture of students is formed. The formation of the legal culture of students can be imagined, based on the content and specific features of the legal culture of the university team and with the help of clarifying the sequence of the influence of legal cultural values on the legal awareness and behavior of students in legal relations and legal activities. Students join the collective of higher education institutions with a legal culture that has already been formed under the influence of family, school, and informal communication.

In the process of further socialization, acquisition and expansion of legal capacity, students increasingly join the basic legal culture of society, assimilate specifically defined norms and values, and acquire a defined value-legal orientation. The inclusion of students in the legal culture of the collective can take place in two directions: firstly, in the educational process, where they receive information about law and legal relations, and, secondly, through personal participation in the socio-legal activities of the collective.

The legal culture of a student's personality, as an integrative component of human culture, is a holistic personal formation characterized by:

- a person's constant desire to expand legal knowledge, which represents a socially

significant value for him;

- conviction in the need to carry out professional activities in strict accordance with the law;
- manifestation of established feelings of responsibility and involvement with subjects of law, confidence and self-sufficiency in defending and using subjective rights;
- the need for legal improvement, the desire for the perception of legal attitudes and their practical embodiment in concrete actions.

The student's legal culture can be considered as a certain level and character of legal knowledge, assessments, attitudes and actions in socio-legal relations, as a set of cognitive, volitional and behavioral characteristics that reflect individual and social legal awareness, lawful behavior. In our opinion, the effective functioning of the process of forming the legal culture of students is ensured by a set of the following conditions: using the potential of academic disciplines to study conceptual legal ideas; addition of theoretical legal provisions with information about the possibility of their practical application; selection of the content and experience of practical activities determined by the current life needs and interests of the student; assimilation of the necessary knowledge, which allows future specialists to model their legal professional and everyday activities; inclusion of the student in the active law-recognition and law-enforcement activity of the educational process of higher education institutions; organization of training focused on personal development of the student; introduction of legal special courses, for example, "Legal Culture", "Legal Education", etc., into the curriculum of universities.

The effectiveness of forming the legal culture of students depends primarily on the content and teaching methods of the course in jurisprudence and other legal disciplines. The scope and content of the mandatory course in law is determined for higher educational institutions by the need of society and the international community to educate a law-abiding citizen, and in addition, also by high requirements for the educational, educational and qualification level of a person.

Conclusions. Legal culture as a component of general culture is a unique system of legal values that correspond to the level of legal progress achieved by society and reflect in legal form the state of individual freedom and other important social values. The legal culture of students is a combination of intellectual-volitional and moral-psychological integrated components that interact in a coordinated manner and are manifested in legal awareness, understanding and feelings, skills and habits that regulate one's own behavior in determining a legitimate goal, legitimate ways and means of achieving it, justice, impatience to offenses, responsibility, the perceived need for legal self-education.

The legal culture of students should be characterized by: a person's constant desire to expand legal knowledge, which is a socially significant value for him; belief in the need to carry out professional activities in strict accordance with the law; the manifestation of established feelings of responsibility and involvement with subjects of law, confidence and self-sufficiency in defending and using subjective rights; the need for legal improvement, the desire for the perception of legal attitudes and their practical embodiment in concrete actions.

The criteria and indicators of the legal culture of the future specialist are intellectual, emotional, motivational-value, volitional, primary-practical, behavioral. The problem of the formation of legal awareness and legal culture of students remains insufficiently developed to this day, because previously it was not aimed to investigate the issue of the formation of legal awareness and legal culture of future teachers, psychologists, economists, managers, doctors, engineers, physicists, etc., their readiness to live and work in a legal, democratic state. Many aspects still require a more in-depth and detailed definition, systematization and theoretical generalization, in particular, the determination of the specifics of legal culture and legal awareness of students, the introduction of new forms and methods of their legal education, etc. in the context of international relations.

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MODEL OF MORAL AND LEGAL NORMS AND RULES OF CHILDREN'S BEHAVIOR

Anna Zadorozhna,

Candidate of Pedagogical Sciences,

Kateryna Volokhata,

Candidate of Pedagogical Sciences,

Humanitarian and Pedagogical College named after

Mykhailo Hrushevsky, Ukraine

Annotation. *The article presents a model of the process of legal education of children aged 6-7 in the interaction of family and educational institution, which reflects the main components, their interaction and is implemented in three stages: information and enrichment (acquaintance of children with international human rights instruments; expansion of children's ideas about their own rights and responsibilities), emotional and personal (formation of children's ideas about moral and legal values and norms, awareness of rights and freedoms as an important prerequisite for joint life of people in the social environment), behavioral and corrective children's awareness of rights and freedoms as a regulator of human relations in the social environment, the formation of socio-legal skills and abilities to comply with and implement socially accepted rules).*

To ensure the content and methodological foundations of the model, a method of legal education of children aged 6-7 in the interaction of family and educational institutions was developed. The developed program "We know our rights and do not forget about responsibilities" for children 6-7 years old, which sets out the content of children's legal ideas and forms and methods of experimental methods, covered the following sections: "Little man's rights". "Rights of a small citizen", "Social and cultural rights of children".

The final sections made at the final stage of the study showed an increase in the number of children and young people with a sufficient level of legal education in the experimental group, in contrast to the control. Mathematical processing of the results obtained at the final stage of the experiment confirms the non-randomness of the discrepancy between the evaluation results of children in the control and experimental groups, and proves that changes in the levels of legal education of children and youth in the experimental group are reliable and statistically significant.

Keywords: *rights, moral and legal education, model and experimental methods of legal education of children, rules of conduct, semantic and methodological principles of the model.*

Introduction. For the comprehensive development of the child and the deepening of his moral and spiritual feelings, knowledge is needed that would allow to form a conscious attitude to the phenomena of the social environment. However, here, as in the process of informativeness, there are age limits that determine how a child of a certain age can be aware of and emotionally experience what is perceived. This is especially important for the formation of moral and legal ideas in the process of legal education of children, as some social feelings are completely inaccessible to preschoolers (feelings of duty, justice, national pride, patriotism, etc.).

It is also important that the available knowledge should not only carry information,

but also be emotionally colored with feelings and evoke moral and legal feelings, which is required by the peculiarities of socio-emotional development of children 6-7 years. Therefore, in building a model and experimental methods of legal education of children became relevant moral and legal ideas that served them in the development of spiritual values, the ability to perceive and evaluate their own actions and the actions of others from the standpoint of law, take into account thoughts, desires, needs fairly, independently, with a sense of self-worth, and so on.

Analysis of approaches to the interpretation of the concept of model and experimental methods of legal education of children allows to summarize it as follows: the method of knowing the qualities of the object with the help of models; contains the creation of models and actions with them, which allow the process of studying individual aspects, qualities and properties of the object or its prototype [4, p. 36]; which is based on abstract-logical thinking and provides the possibility of building abstract models that would logically determine the boundaries of the study of system elements [2, p. 102]; method of theoretical and practical study of the object by designing and studying a model that mimics the essential properties of the original, is able to replace the object so that the use of the model provides new information about the object [5, p. 274].

The purpose of the article is to reveal the model and experimental methods of legal education of children. The main task of building this model was to explain the importance of moral and legal norms and rules of conduct and the importance of their observance in their behavior and activities of children.

Presenting main material. In a broad sense, a model is an image or prototype (conditional or mental) that looks like a description, diagram, image, graph, plan, map, etc., which is used under certain conditions as a "substitute" for a particular object, phenomenon, process. In the pedagogical encyclopedia model (French *modele*, from Latin *modus* - measure, sample, norm) is interpreted as: "a system of objects or signs that reproduces some essential properties of the original system; it is a generalized reflection of the object, the result of abstract pedagogical experience, not a direct result of the experiment" [2, p. 323].

The study simulates the process of legal education of children 6-7 years old for its knowledge and reproduction of essential properties of the object, as well as determining its adequacy to the studied aspects, taking into account the basic principles of modeling - clarity, certainty, objectivity [2, 3, 4].

Given this, the model of the process of legal education of children 6-7 years is understood as a general scheme of the educational process with relevant components (purpose, objectives, stages, content, forms and methods), which allows to identify the necessary to study to study the object of communication in the form of a definite and visual form (Fig. 1), convenient for analysis and conclusions [3].

According to the developed model, the process of legal education of children was carried out in three stages:

- information and enrichment (acquaintance of children with international documents on human rights protection; clarification and expansion of children's ideas about their

own rights and responsibilities);

- emotional and personal (formation of children's ideas about moral and legal values and norms, awareness of rights and freedoms as an important prerequisite for the joint life of people in the social environment);

- behavioral and corrective (children's awareness of rights and freedoms as a regulator of human relations in the social environment, the formation of skills and abilities to comply with and implement socially accepted rules). socio-legal.

The result of the model of legal education of children aged 6-7 in the interaction of family and educational institutions is to increase the level of legal education of children aged 6-7 due to the effective functioning of family and educational and legal developmental environment of the educational institution. The proposed model should help students to form a cognitive interest in their own rights and responsibilities and awareness of them as an important condition for the joint life of people in society.

To ensure the content and methodological principles of the model (Fig. 1), a method of legal education of children aged 6-7 in the interaction of family and educational institutions was developed. First of all, at the propaedeutic stage, the program "We know our rights and do not forget about our responsibilities" was developed for children aged 6-7, which sets out the content of children's legal ideas and forms and methods of experimental methods.

The program covered the following sections: "Rights of the little person" (right to life, name, family, housing, food, property, protection from physical and mental violence, in his own opinion, freedom, dignity and equality) ; "Rights of a small citizen" (right to citizenship, protection from exploitation, from work harmful to health, the right to participate in society), "Social and cultural rights of children" (special rights of orphans and children with disabilities) , the right to association, protection from economic exploitation, the right to education, health care, work, play and leisure).

The tasks of the program "We know our rights and do not forget about our responsibilities" were defined as follows [3, p. 203]:

- to acquaint children with the concepts of "right" and "duty", with documents that define the rights of the child (Constitution of Ukraine, the Declaration of Human Rights, the UN Convention on the Rights of the Child);

- to form children's ideas about their own rights and responsibilities, the rights of others, understanding of law as a human value, as an important condition for the common life of people and the regulator of their relationships in society;

- explain the need to comply with prosocial norms and rules of conduct, consolidate the acquired knowledge in everyday life in the family and educational institution, gradually gaining experience in the observance of rights and responsibilities and lawful behavior in society;

- to form in children a sense of self-honor and dignity, truthfulness, benevolence, justice, responsibility, awareness of their rights and freedoms;

- learn to respect the dignity and personal rights of others, regardless of their nationality, external and behavioral identity or differences;

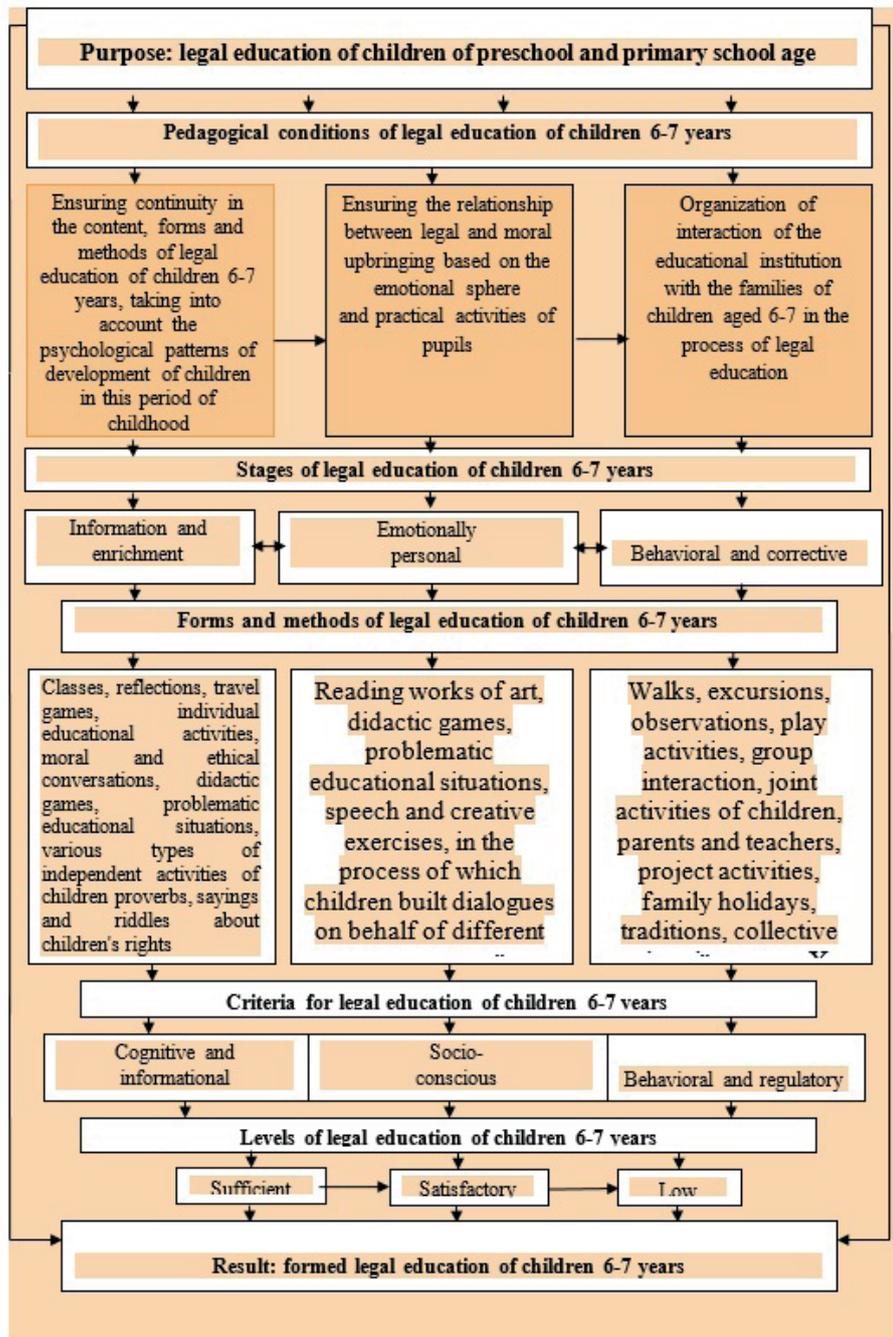


Fig. 1. Model of moral and legal norms and rules of conduct of children

- cultivate internal respect for law, laws,
- law and order; humane feelings and adequate relationships, instill respect for themselves and others, develop the desire to exercise their rights without violating the rights of others.

- Here is an example of the development of methodological support for structural and functional elements of the model of legal education of children 6-7 years "Rights of the little man":

"Right to own property"

At the age of 6 they need to be acquainted with property rights. Bring children to understand that each child has his own property, that other people's things can not be taken; explain that the right to property belongs not only to children but also to adults, it cannot be violated, but everyone has a duty to protect the property of others. Develop an understanding of the inextricable link between rights and responsibilities. Educate responsibility, desire to share, learn to ask, ask permission.

At the age of 7, it is proposed to continue to form children's ideas about property, about the inviolability of other people's personal belongings, about the obligation to protect other people's property, about actions when you lose or find someone's thing; about the reasons for children to steal other people's things.

"The right to protection from physical and mental violence":

At the age of 6, minors should be introduced to the right to protection from child abuse. Learn to evaluate people's behavior, have a negative attitude towards aggression, cruelty, and condemn child abuse. Learn to feel the distance and limits of acceptable behavior with strangers, treat them with care, politeness, restraint, teach how to behave in cases where the child is in danger. To bring up responsibility for the actions, ability to control itself, to adhere in relations with people of moral and legal norms and lawful behavior.

At the age of 7 it is necessary to continue to acquaint children with the possibilities of protecting their rights; teach how not to become a victim of crime, how and to whom to turn for help in case of danger; establish rules of personal safety at school and on the street.

To help educators of preschool institutions and teachers of seven-year first-graders, syllabi, didactic, story-role games were developed, works of fiction were selected, which contributed to the formation of moral and legal ideas, skills and experience of lawful behavior of children 6-7 years. in the family, educational institutions and society.

In order to increase the professional competence of educators of preschool institutions and teachers of first-graders who participated in the experiment, seminars were held to acquaint them with the theoretical foundations of legal socialization of the individual; development of theoretical knowledge and practical skills of teachers on legal education of children and practice of practical situations of interaction with parents; acquaintance with the program "We know our rights and do not forget about responsibilities" and methods of legal education of children [3, p. 204].

For teachers and primary school teachers, a plan of a permanent seminar "Shaping

the legal personality of the child in interaction with the family" was developed, which provided for a number of different forms:

- seminars to address theoretical and practical issues of legal education ("The urgency of the problem of legal education of children", "Continuity in the legal education of preschoolers and primary school children", "Child abuse", "Documents that protect children's rights");

- consultations for teachers on legal education of children and the organization of interaction with parents ("The child needs self-esteem", "Features of the formation of legal awareness in children 6-7 years", "Principles of creating a legal environment in education and family", "Methods" and methods of legal education of children 6-7 years "; " Unity of content, principles and methods of moral and legal education "; " Forms of cooperation between teachers and parents in the legal education of children ");

- brainstorming "How to prevent adult abuse of children?", "How to prevent domestic violence against children?", Organization of "Schools of interaction with parents" (topics: "Punishment and encouragement in the process of raising a child", which arise in the process of working with children "; " Problematic situations that arise in the process of interaction with parents "; " Legal culture of parents "; " Forming the legal culture of teachers ");

- workshops ("Barriers encountered in the work of teachers"); competitions of professional skill (demonstration of open classes on the topic "Protection of children's rights", "My rights and responsibilities");

- mini-discussions ("Is it necessary to create a special legal environment in an educational institution?";

- organization of Children's Rights Weeks, business games ("Methodological aspects of conducting special classes on legal education of children", "I am a child and I have the right"), etc.

The process of legal education of children aged 6-7 also provided for the acquaintance of children with the norms of another international document, which enshrines the basic rights of children - the UN Convention on the Rights of the Child. The acquaintance of children with the Convention included the educator's story that this document was created by adults to protect children's rights, that it contains a list of rights that all children have, regardless of skin color, hair, eyes, place of residence, language, all children in their rights, explained why people adopted such a document, and that all countries and our country also recognized it as the main document that protects the rights of children. Educators told children that many years ago adults did not talk about children's rights, the need to care about them [3, p. 205].

Previously, children did not have toys, their children's clothes. And only three hundred years ago, adults realized that children are little people who have their own interests, hobbies, love to play. They start creating furniture, making toys, sewing children's clothes, composing songs, music and poems. And then they created a special book - the Convention on the Rights of the Child, which recorded all the rights of children.

Stories about children who for various reasons do not have a mother and father, who are brought up in special orphanages, that they all dream of having a real family and their parents were relevant to the study. Interviews were held with children on the following topics: "Declaration of Human Rights", "UN Convention for the Protection of the Rights of the Child", "Children and adults - people living on Earth", "Who protects the rights of children?", "Rules for how children live", "What can you do better than adults?". Such work contributed to the development of children's interest in the stated issues, stimulated cognitive and emotional activity of children, which is reflected in the structure of the model of legal education of children 6-7 years "Little Man's Rights".

In the future, special attention was paid to children's awareness of the unity and inseparable connection of rights and responsibilities, for which a series of moral and ethical discussions were held "Our responsibilities at home and in the group", "Do we also have responsibilities, do we only have rights?", "Why can't the rights of other children be violated?", discussion of problematic situations "What were the children wrong about?", "What were the children right about?". Conducting such conversations with children has convinced us that only a conscious understanding and a positive attitude to rights and responsibilities motivates children to control their behavior, to act in a way that does not violate the rights of other children. Therefore, choosing topics for ethical conversations with children, we tried to present their content in an interesting way, because it is interest that promotes the development of moral motives for respecting other people's rights, as well as creating a positive emotional background, influencing children's spiritual and moral feelings, their emotional sphere [1, 2, 3].

In order to consolidate the obtained moral and legal ideas, use games that give the child "accessible to him ways of modeling the surrounding life, which make it possible to master the seemingly unattainable reality." Didactic games conducted with children: "Good or bad?", "Flower of rights and responsibilities", "Rights and responsibilities of fairy tale characters", "Security lessons", "What right is violated in a fairy tale?", "I have a duty "Language", "Names of responsibilities", "Responsibilities of parents, responsibilities of children", "Responsibilities in our family", "Legal field" contributed to the orientation of children in the social environment, "taught to live" according to certain rules.

Research and experimental work on the implementation of the model and methodology of research was carried out on the basis of educational institutions № 14, № 8 m. Sumy, № 12, № 20 m. Kherson, № 1, № 7 m. Bar (Vinnytsia region), (50. m Cherkasy, № 1 Uman, № 4 Korsun-Shevchenkivskiy, Cherkasy region, № 33 Kropyvnytskyi, Kirovohrad region. It covered 240 children of senior preschool and primary school age, 20 educators of preschool institutions, 20 primary school teachers.

The results of calculating the criterion χ^2 at the final stage of implementation of the model and experimental methods of legal education of children confirm the statistical validity of the assumption of the study, namely - not accidental discrepancy in the evaluation of children of control and experimental groups. 6-7 years. Let's calculate the experimental data of the final section similar to the servational experiment (Fig. 2, Table 1).

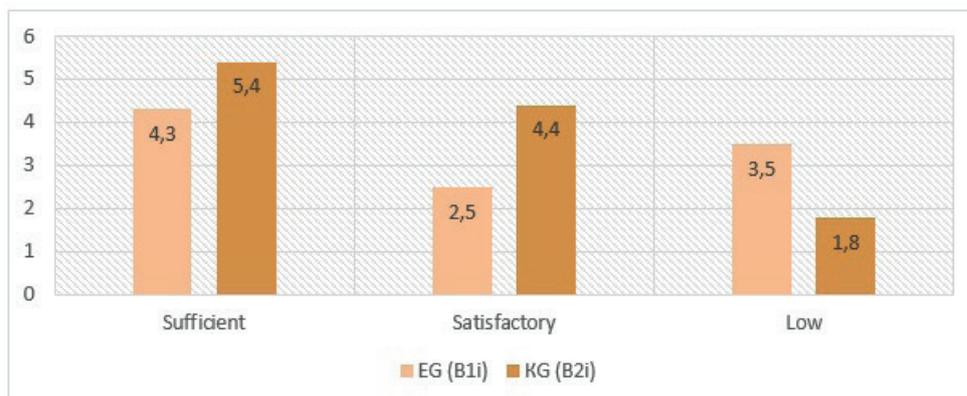


Fig. 2. Levels of formation of legal education of children 6-7 years

Satisfactory level of legal education (Fig. 2) was demonstrated by the children of EG persons who lacked knowledge of their basic rights and responsibilities, lack of awareness of their meaning and differences, did not always correctly mean these categories in words; These children generally had knowledge of the norms of lawful behavior in society (in the family, educational institution, in public places), but they did not always understand the need to comply with them in different social situations; emotionally reacted to violations of their rights, but did not always show respect for the rights and freedoms of others, did not always correctly assess the behavior of others from the standpoint of compliance or violation of legal norms, ability to feel the limits of acceptable behavior and give moral and legal assessment ; analyzed actions from the standpoint of compliance or non-compliance with moral and legal norms only with the help of an adult; showed not always positive characteristics of individual behavior, only in some cases demonstrated the ability to implement lawful behavior in everyday activities, in general were able to coordinate their actions, behavior with others, but acted in this way only at the prompting of an adult.

The low level of legal education (Fig. 2) indicates a lack of knowledge of their basic rights and responsibilities, lack of awareness of their meaning and differences, inability to define these categories in words; these children had a superficial knowledge of the rules of lawful behavior in society (in the family, educational institution, in public places), did not understand the need to comply with them in different social situations; did not react to violations of rights, did not show respect for the rights and freedoms of others; were not able to properly assess the behavior of others from the standpoint of compliance or violation of legal norms, did not feel the limits of acceptable behavior; did not give a moral and legal assessment of violations of children's rights; were not able to analyze actions from the standpoint of compliance or non-compliance with moral and legal norms; showed negative characteristics of individual behavior, could not implement lawful behavior in everyday activities, coordinate their actions, behavior with others.

The CG of persons (Fig. 2) presents the results of a sufficient level of legal education in children, characterized by full and conscious knowledge of their basic rights and responsibilities, awareness of their meaning and differences, the definition of these categories in words; awareness of children with the rules of lawful behavior in society (in the family, educational institution, in public places), understanding the need to comply with them in different social situations; appropriate emotional response of the child to the violation of their rights and the rights of other children, respect for the rights and freedoms of others, adequate assessment of other people's behavior from the standpoint of compliance with legal norms, ability to feel the limits of acceptable behavior; the ability to analyze actions from the standpoint of compliance or non-compliance with moral and legal norms, identifying positive characteristics of individual behavior of the child, the ability to implement lawful behavior in everyday activities, to coordinate their actions, behavior with others.

Table 1

The results of the calculation of experimental data of the final section

Levels	The results of the calculation of the criterion χ^2				The value of the criterion
	EG (B1i)	KG (B2i)	$(A1*B2i - A2*B1i)^2$	$(B2i+B1i)*(A1*A2)$	
Sufficient	20	19	8540889,35	3424084	2,49435754
Satisfactory	49	50	635272,762	388955,5	1,63327869
Low	51	46	17646446,6	2729596	0,64648628
The total number of	120	120	The value of the criterion from the experiment		10,4049126
Critical value of the criterion					7,815

It should be noted that the rather large experimental value of the statistics of the criterion χ^2 and a significant number of observations determine the high plausibility of the results of statistical testing of the research hypothesis.

Thus, the obtained results allow us to conclude that the changes that have occurred in the EG of individuals due to the experimental work on the implementation of pedagogical conditions of legal education of children 6-7 years on the basis of family and educational institution, and developed models and experimental methods of their implementation in the educational process of preschool and primary schools in cooperation with the families of pupils.

Conclusions. Thus, the proposed model of legal education of children 6-7 years contributed to their assimilation of ideas about law as a universal value, self-consolidation of moral and legal ideas, expressing their own judgments, activities in various situations through establishing relationships on a legal basis.

The model of children's legal competence contributed to the formation of their ideas about rights and freedoms as an important prerequisite for the joint life of people in the social environment, moral and legal values and norms, the need for empathy, care and attention to peers and others, moral qualities (kindness, honesty, sensitivity, justice,

friendship, etc.); Important attention was paid to children's understanding of the content of moral and legal ideas, for which they used reading works of art, didactic games, problematic educational situations, speech and creative exercises, in which children built dialogues on behalf of various fairy tale characters, reflection situations, tournaments children "; logical exercises, moral and ethical conversations, in the process of which the formation of the foundations of the child's legal consciousness took place.

Teachers focused on the content of moral and legal concepts (equality of all people, freedom, obedience to the law, etc.), namely: "people's relationships in life are governed by law. The law is a set of rules that govern the relationships of all people. It is impossible to do without the law, because these rules help people to live happily. If someone breaks the law, he should be held accountable "; "Everyone is born free. Being free means being able to do something interesting (play, draw, read, travel) or think about what we want. But being free also means that you can think and do what you want only if you do not disturb other people and do not violate their rights. These ideas were consolidated during individual conversations with children about the right of everyone to be free in actions, words, deeds, about the equality of all people, about the right to protection from humiliation, about the inadmissibility of humiliation and dignity of every person.

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PERSPECTIVE ON FORMATION OF FUTURE MILITARY OFFICERS' READINESS TO USE STEM-TECHNOLOGIES: A CASE STUDY OF UKRAINIAN HIGHER MILITARY EDUCATIONAL ESTABLISHMENTS

Ievgeniia Ivanchenko,

Doctor of Pedagogical Sciences, Professor,

Oleh Masliy,

Doctor of Pedagogical Sciences, Professor,

Nataliya Bhinder,

Doctor of Pedagogical Sciences, Associate Professor,

Oleksandra Shahova,

Candidate of Pedagogical Sciences,

Ihor Cherkun,

Candidate of Pedagogical Sciences,

Svarychevska Anzhela,

Candidate of Pedagogical Sciences,

National University «Odesa Maritime Academy», Ukraine

Annotation. *STEM-readiness is an integral component of future military officers' professional competence as technical modeling, electric and electronic equipment, information and communications technologies, computing and automation instrumentation systems are widely involved within defense and security sphere. The purpose of the article is to explain the peculiarities of formation of future military officers' readiness to use STEM-technologies within their professional activities at the Ukrainian higher military educational establishments. According to the research, such training needs the implementation of a number of pedagogical conditions oriented towards formation of cadets' readiness to use STEM-technologies. To achieve the purpose of the article, we carried out the research on the basis of experts' estimations. The study involved 36 experts (instructors and research fellows) who work at different Ukrainian higher military educational establishments. As a result, we built the matrix of efficient pedagogical conditions contributing to formation of STEM-readiness among future military officers.*

Keywords: *STEM-technologies, higher military educational establishment, pedagogical condition, professional competence, readiness.*

Introduction. In the face of uncertainty of economic, political and social situation in the state, long-running conflict in the east of Ukraine, rapid development of technologies, shift in the nature and conduct of warfare, strategic realignments, introduction of new ways of waging war we observe the Armed Forces of Ukraine reaching the new qualitative level and adapting to innovations and transformations in military affairs. This, in turn, will maintain strong defensive capabilities under all circumstances of military, political and strategic situation and guarantee stable development of Ukraine.

To solve the task mentioned above it is necessary to evaluate human resources being national wealth and their efficiency within military management, industry, science and

education. It, above all, invokes the system of national security and makes the process of military officers' training a priority in respect of further reformation of the Ukrainian Armed Forces and their approximation to the international standards at the present stage.

Modernization of future officers' professional training at the higher military educational establishments is to be oriented towards formation of their ability to carry out professional duties under principally new geopolitical, political, economic conditions, ability to use appropriate technologies for solving military tasks and keeping life-long personal and professional improvement. Therefore, we connect such modernization of future officers' professional training to form their readiness to use STEM-technologies within the professional activities (hereinafter – STEM-readiness) at the higher military educational establishment. STEM-readiness is defined as integrated quality of personality that is characterized by the ability to interact and mutual influence between all components of the system of management, exploitation and use of armament and military equipment. Also, the category of STEM-readiness includes the ability to create and read different sorts of sign systems. Consequently, it is the basis for formation of competencies of future officers of Ukrainian Armed Forces outlined in the professional requirements and standards.

Initial prerequisites. To distinguish all the necessary conditions of formation of future officers' readiness to use STEM-technologies within their professional activities in the process of professional training at the higher military educational establishments we have analyzed the scientific works concerning the basic scientific categories, «condition» and «pedagogical condition» particularly.

Thus, the category of condition, according to a number of native and foreign researches, means a set of data or situations that underlie something, a necessary circumstance contributing to creation of something [1], labeled set of complex elements oriented towards development, education and training [2], philosophical category reflecting universal relation between an object and those factors due to which it emerges and exists. Appropriate conditions help to change the qualities of some objects and facilitate their transformation and improvement [3]. According to B. Zhetpisbaeva and A. Ulzhabaeva [2], conditions concern a general scientific notion representing a collection of causes, circumstances, objects that affect the functioning and development of any element within the system.

We shall now analyze the category of pedagogical condition and outline the most efficient pedagogical conditions forming readiness of future officers of the Armed Forces of Ukraine to use STEM-technologies within their professional activities.

The term «condition» from pedagogical point of view relates to a collection of the following elements: objectives, development factors, technologies, learning techniques, means of learning, educational instruments, and administrative support [4]. In other words, it is a set of interrelated measures of the educational process when preparation of future specialists is aimed towards the well-planned and arranged process of improvement and development of the pedagogical process subjects [5]. In our case these subjects are the cadets studying at the higher military educational establishment.

Pedagogical conditions are objectively and subjectively associated with the form of pedagogical activity whose concrete purpose is to train of highly qualified specialists [6] affecting their intellectual, physical, psychological, and moral personality development.

R. Gagné [7] defines learning conditions as a set of different factors that influence learning significantly. Some conditions are external stimuli while other conditions are internal ones. Accordingly, internal conditions concern what the learner brings to the learning task and what the learner knows prior to being trained. External conditions deal with the stimuli that are presented to the learner such as instructions provided by the teacher, organization of educational process, instruments used [8]. The findings show that pedagogical conditions are actually external circumstances; they maintain and develop the educational process ensuring its appropriate organization that is defined, in its turn, as the process to reach the certainty in external and internal relations within the system necessary to support its stability despite the changing environment [5].

K. Kostiuchenko [9] admits that pedagogical conditions are objective possibilities, circumstances and events of pedagogical process that appear in the result of goal-oriented selection, construction, and usage of elements of content, methods, organizational forms of educational process to reach pedagogical intentions or to solve various educational tasks [10]. A number of scientists [10, 11, 12, 13] agree that pedagogical conditions are factors that influence (intensify or impede) formation and development of pedagogical phenomena, processes, systems, and personality qualities.

Pedagogical conditions, addressed as one of the essential components of the professional training system. Also, they reflect the combination of capabilities and educational materials, affecting the personal and procedural aspects of this system, and ensure its effective functioning and development [2]. Pedagogical conditions are divided into two levels. The first level of conditions includes personal characteristics of those who study and they determine the efficiency of educational process. The second one concerns circumstances of educational process realization including learning content, participants' activities organization, interpersonal relations between all the participants, adaptation of those who study to new educational environment [7, 14] and resourcing of the educational process [15].

The pedagogical conditions for the formation and development of the subjective position of future specialists in the process of professional education at the university are defined as a set of interrelated measures within the pedagogical process to train the subjects of professional development and organize their continuous professional improvement [5].

The common feature for all these definitions is orientation of pedagogical condition towards improvement of interrelations between participants of educational process while solving concrete didactic tasks. For our research pedagogical conditions are very important categories that contribute to formation of future military officers' readiness to usage of STEM-technologies within their professional activities. They positively influence upon building and development of all components of readiness as a significant part of their professional competence. In addition, the development and further implementation

of relevant pedagogical conditions in the structure of educational process facilitate the professional training of future specialists significantly and enhance efficiency of all its structural components [12]. L. Bol and J. Garner [16] state that the conditions influence the outcomes of educational process and may lead to its improvement using the more effective strategy of activating the existing state of specialists' training [11, 16].

Thus, to organize the educational process properly at the higher military educational establishment we have to implement a set of pedagogical conditions that shape the pedagogical results concerning education in general, professional training, development of future officers' personality, and objectively provide the possibility to fulfill the stated tasks.

Naturally, pedagogical conditions affect the cadets' professional development but they can intensify or impede the processes of formation of personality qualities as well [17]. Therefore, for example, overloading of cadets with the same type of tasks and spending a considerable amount of time for independent work reduce their motivation to learning; and repeated activities during the lessons in front of the computers negatively affects cadets' physical condition and leads to declining academic performance. O. Lebedieva [17] and I. Anikin [18] stress on increasing of learning motivation and productive activity while implementing appropriate pedagogical conditions in the training process.

Formulation of goals. That is why to organize the effective process of formation of future military officers' readiness to use STEM-technologies, it is necessary to outline pedagogical conditions accurately, describing their development, maintenance, support, and possible improvement. O. Povstyn [19] admits that a set of pedagogical conditions should include equally important psychological-pedagogical factors and social-pedagogical circumstances.

In our view, combination of traditional approaches to educational process with innovative ones based on the rapid changes within technological, economic and defense fields is important for efficient organization of educational process at the higher military educational establishments. And, therefore, pedagogical conditions should consider not only current tasks facing the Armed Forces officers but prospects for military modernization. It means that fundamentalization taking place in the current system of training [20] is accompanied by technologization of educational process that is important feature of existing innovative transformations at the current system of higher military education.

Creation and usage of informational and educational environment of higher military educational establishment is, in our view, urgent task for future officers' training organization since it contributes to formation of their abilities to choose and use different technologies under circumstances of permanent development of information society during their learning and future professional activity. This issue started to become more important as the COVID-19 pandemic has affected education of students of different specialities, including future military officers. Informational and educational environment provides the cadets' active involvement while learning, gives them permanent access to educational materials and helps instructors control the level of knowledge and organize the distance and blended lessons.

Thus, the findings show that pedagogical conditions of formation of future military officers' readiness to use STEM-technologies within their professional activities refer to a set of methods, organizational forms and circumstances considering peculiarities of realization of educational process at the Ukrainian higher military educational establishments. Pedagogical conditions being a complex category contribute to formation of this type of readiness within educational environment significantly.

STEM-readiness is currently an integral component of professional competence of specialists in any field, including defense and security sector. It is based on the possession of collection of skills and abilities to use the means and equipment connected with technical modeling, electric and electronic technologies, information and communications technologies, computing and automation instrumentation systems, scientific researches in the field of armament and military equipment, multimedia technologies, telemechanics, robotics, intellectual systems, radioengineering, and radioelectronics [21, 22, 23].

We assume that STEM-education peculiarities and formation of future specialists' readiness to use STEM-technologies within their professional activities are not the subject for many studies and scientific discussions. For example, A. Riabukha [24] studied the designing of pedagogical conditions to teach students to use multimedia technologies. J. Forakis, J. March, & E. Erdmann [25] analyzed the impact of COVID-19 on the professional training of future STEM-specialists. The works of P. Kurup [26] concern the building of future primary teachers' capacity in STEM. B. Yıldırım and C. Türk [27] outlined the training of future teachers to use some selected STEM-technologies. V. Oliynyk [28] described the peculiarities of STEM-education in the system of training of future engineers. M. Storksdieck [29] pays attention to connection of critical information literacy and STEM learning. Advanced experience of foreign countries in the field of STEM-education is presented in the works of [30, 31].

But only rare works are devoted to formation of readiness to use STEM-technologies among future military officers. Thus, V. Miroshnichenko [32] investigated the peculiarities of implementation of STEM-technologies in the process of professional training of future border guard officers. T. Plachynda and O. Ursol [33] studied the reasonability of implementation of STEM-technologies within professional training of future aviation officers. C. Steidle [34] described the formation of STEM-competence among military officers. The main attention is drawn towards estimating the proportions of veterans and females in the STEM workforce. It means that the problem of formation of future military officers' readiness to use STEM-technologies within their professional activities needs examining and accurate clarifying.

Preparation of the experiment. To conduct our research, we had to outline the set of appropriate pedagogical conditions to be used at the higher educational establishment while training future military officers.

According to R. Trotskyi [35] they include the following:

- modernization of content, methods and forms of professional training to build cadets' readiness to future professional activities (updating the content of professional subjects by extending the usage of learning; organization of methodic, scientific-

methodic seminars for instructors, developments of profession-oriented syllabi);

- activization of cadets' research work and extra-curriculum activities (organization of tutorials for cadets, involvement them into various project activities, assistance them in research concerning future professional tasks);

- development of educational and methodical support of the process of formation of cadets' readiness to professional activity.

To note, while modernizing the content of professional subjects it will be necessary to improve the content of general subjects (both the humanities and the fundamentals) simultaneously. In our point of view, this will help provide in-depth training of future military officers.

Other conditions include [36]:

- increase in the number of lessons for certain subjects within the structure of military and professional training of future officers (psychological, weapons, and physical training);

- increase in the number of practical classes and laboratory works within the structure of military and professional training of future officers (lessons with the use of simulations of military equipment in the territory of military division);

- involvement of reserve officers and veterans into the process of training as their active roles help enhance the cadets' learning performance and motivation indices.

We consider the increase of practical classes is a real convincing argument that modernizes professional training of future military officers but we cannot give more hours for academic subjects that constitute the training programme of future officers. As a result, we try to reallocate the types of classes within the structure of training programme. For example, some theoretical lectures were changed into practical classes or group sessions. But when we select themes for training programmes it is necessary to substitute them with another type of lesson. For example, the methods and means of electronic documents cannot be analyzed during a lecture but it is recommended to study this theme during a group session when the cadets have the possibility to perform some activities simultaneously on the computer. Obviously, it increases the level of their knowledge and learning performance.

Current development of technologies enables to widen the circle of professional training of future officers. For example, M. Kos [37], investigating the problem of usage of imitation modelling of tactical level in the process of future officers' professional training, outlined the set of necessary pedagogical conditions. They relate to the following: adaptation of NATO techniques within the Ukrainian Armed Forces and their usage in the process of future officers' professional training; maximal approximation of imitation computer games to real combat situations using relevant scenarios on the basis of repetition and correction of professional actions; development of consultative materials for instructors; and the psychological guidance oriented towards realization of the role of imitation computer games as a means of preventing casualties under real combat circumstances by future officers; formation of future officers' leadership qualities; formation of creative professional thinking.

The usage of imitation modelling helps the cadets to get ready for real combat situations and affects the quality of their training. But, obviously, that consultative materials for instructors are not enough anymore. And it is necessary to organize methodical meetings and practical exercises with officers and pedagogical staff, scheduled interdepartment seminars, trainings to active usage of imitation software and involvement of the instructors from other departments to organize extended and integrated events. When the cadets work with computer modelling, interactive software simulations in the classroom contribute to their full development, increase of their motivation to independent usage of various technologies within professional activities.

P. Darmohrai [38] distinguishes a number of pedagogical conditions for formation of professional competence of future officers of the State Penitentiary Service but the main attention is drawn towards activization of cadets' independent work during planned lessons and extracurricular activities. In our opinion, this condition is a universal one and it is a necessary factor for formation of future professional in any field as independent work creates a personality who is able to lifelong self-development and self-improvement. These ideas are supported in the works of B. Greener [39] that focuses on professional improvement of military specialists under modern circumstances of educational environment following the requirements of military service.

Professional formation of future officers of the Armed Forces is defined as «dynamic process of formation of adaptability to activity at the different stages of their career» [40, p. 71]. Understanding pedagogical condition as a «phenomenon shortening the period of cadets' adaptation to learning at the higher military educational establishment and also reducing the psychological impact of crisis that can create more comfort situation for organic settling into a new community» [40, p. 60], the following pedagogical conditions are distinguished: establishing of continuity of pedagogical process (military lyceum – higher military educational establishment); organization of positive communication between cadets; peer or horizontal learning that means assisting younger cadets by officers or senior fellows [40].

Considering the modern tendencies of development of higher military education, it is very important, in our point of view, to organize positive communication inside the cadets' community. But not only that. Trust-based atmosphere between all participants of the educational process in the classroom (instructor-cadet and cadet-cadet schemes) activates cadets' cognitive procedures. At the same time absence of fear or embarrassment, if even inappropriate questions are asked, definitely contributes to cooperation and, as a consequence, better performance.

According to V. Monastyrskiy [36], to create pedagogical conditions of military and professional training of future officers of the Armed Forces of Ukraine, it is necessary to consider the following factors: the level of basic military training, systematic and permanent motivation to acquisition of professional knowledge and skills, usage of professional skills, implementation of activity-based approach to creation of critical awareness on cadets' future service for the Ukrainian Armed Forces and other state agencies of special designation; introduction of innovative teaching technologies within

the educational process at the higher military educational establishment; encouragement of self-development and independent updating of knowledge, skills and abilities; improvement of forms and principles of educational and methodical work performed by scientific and teaching staff.

These findings allow us to outline the collection of pedagogical conditions that can, in our opinion, contribute to formation of future military officers' readiness to use STEM-technologies within their professional activities:

- 1) updating of scientific and methodic maintenance of academic subjects constituting training programme when the number of hours was increased (U1);
- 2) designing of lessons based on cadets' individual differences (U2);
- 3) humanization of educational process (U 3);
- 4) strengthening training in life science with the use of STEM-technologies during lessons with future military officers (U4);
- 5) realization of monitoring of results of teaching of fundamental subjects in the context of military affairs (U5);
- 6) creation of positive motivational attitudes towards non-standard approach to realization of educational process at the higher military educational establishment (U6);
- 7) using of innovative technologies contributing approximation of practical lessons to real combat situation (U7);
- 8) enhancing of military and professional competence of instructors teaching fundamental subjects (U8);
- 9) organization and adaptation of positive communication in cadets' groups according to instructor-cadet and cadet-cadet schemes (U9);
- 10) activation of future military officers' self-improvement and creativity while solving applied military tasks (U10);
- 11) promotion of development and permanent monitoring of levels of formation of professionally important qualities of future military officers (including moral, emotional, and volitional ones) (U11);
- 12) establishment of positive information environment for development of research abilities and creativity during independent work (U12);
- 13) helping cadets to accept themselves as subjects of particular profession (U13).

Expert group work. To determine the most efficient pedagogical conditions through the experiment, we involve the expert group of 36 teaching and research fellows from a number of higher military educational establishments: National Academy of the National Guard of Ukraine, Institute of Naval Forces of the National University «Odessa Maritime Academy», Military Institute of Telecommunications and Information Technologies named after the Heroes of Kruty, Military Academy (Odesa). The experts were asked to estimate pedagogical conditions of formation of STEM-readiness from 13 points (the most significant) to 1 point (the least significant) that is in accordance with the principle «the more, the better». As a result, we have obtained the matrix of experts' estimations of pedagogical conditions that were selected for formation of readiness to use STEM-technologies by the future military officers within their professional activities (table 1).

Table 1

Matrix of experts' estimations of pedagogical conditions selected for formation of STEM-readiness

Experts	Conditions												
	U1	U2	U3	U4	U5	U6	U7	U8	U9	U10	U11	U12	U13
1	4	12	5	11	2	9	6	3	7	13	10	8	1
2	6	7	4	8	3	11	13	2	10	12	1	9	5
3	12	1	9	13	10	7	11	2	5	8	3	6	4
4	10	2	9	13	3	8	11	4	6	12	5	7	1
5	8	9	7	13	2	12	4	10	5	6	11	3	1
6	2	8	5	11	3	12	9	1	7	10	4	6	13
7	8	2	3	9	7	13	4	12	5	11	1	6	10
8	13	2	11	12	3	10	7	1	8	9	6	5	4
9	6	3	12	9	1	11	5	13	2	10	4	7	8
10	12	2	6	13	4	10	7	1	9	5	3	8	11
11	12	8	13	9	2	5	6	1	11	7	3	10	4
12	5	4	6	8	12	13	3	9	2	11	7	1	10
13	4	2	3	12	9	11	5	1	8	10	6	13	7
14	7	3	2	11	4	13	8	12	6	9	10	5	1
15	6	3	4	8	12	7	5	2	1	13	10	9	11
16	8	7	6	11	9	12	4	5	3	13	1	2	10
17	7	8	1	12	4	13	5	3	6	9	10	11	2
18	10	13	3	11	4	9	7	1	8	12	2	6	5
19	11	4	3	13	5	12	8	2	7	10	1	6	9
20	13	2	1	7	5	8	4	3	6	9	10	11	12
21	6	8	10	12	9	5	7	1	3	11	2	4	13
22	1	4	9	10	11	12	2	5	8	3	7	6	13
23	2	5	9	10	7	6	12	11	1	13	3	4	8
24	3	8	4	13	5	10	11	6	12	9	1	7	2
25	7	3	10	12	4	11	1	5	9	13	2	6	8
26	11	9	5	13	3	12	2	4	8	10	6	7	1
27	7	4	3	11	2	13	8	12	6	9	10	5	1
28	12	2	1	7	5	8	4	3	6	9	10	11	13
29	2	5	9	10	7	6	12	11	1	13	3	4	8
30	6	3	4	10	12	13	5	2	1	7	8	9	11
31	10	6	3	11	2	9	7	1	8	12	4	13	5
32	7	3	10	12	4	11	8	5	9	13	2	6	1
33	5	10	6	11	1	10	12	4	9	8	3	7	2

34	6	3	5	9	2	13	12	7	8	11	1	10	4
35	5	12	6	8	4	13	3	9	2	11	7	1	10
36	10	2	9	13	3	8	11	4	6	7	5	12	1
Σ	264	189	216	386	185	366	249	178	219	358	182	251	230
rank	4	10	9	1	11	2	5	13	8	3	12	5	7

The ranks of conditions were calculated based on the overall number of points. Each pedagogical condition was estimated and the points were calculated in accordance with the principle «the more, the better». The table shows that conditions U4, U6 and U10 obtained the largest number of points.

Results of the research. According to the experts' estimations, we found that the following pedagogical conditions of formation of future military officers' readiness to use STEM-technologies within their professional activities have most profound impact:

- strengthening training in life sciences with the use of STEM-technologies during lessons;
- creation of positive motivational attitudes towards a non-standard approach to realization of educational process at the higher military educational establishment;
- activation of future military officers' self-improvement and creativity while solving applied military tasks.

Integration of life sciences is a reason for realization of the first pedagogical condition – strengthening training in life sciences with the use of STEM-technologies during lessons, because it demonstrates the nature of fundamentalization of educational process, helps establish interdisciplinary links, and increases the effectiveness of research work of all the participants of educational process [41]. At the same time formation of «fundamental and knowledge-based» framework of future officer's personality (core of knowledge system of individual) takes place due systematic knowledge, holistic concept of the world and a person, creates the basis for professional culture and excellence [42]. Thus, to create the educational environment with relevant characteristics it is necessary to use integrative approach that promotes cadets' conceptual understanding of different areas of studying and better comprehension of many applications when combining the fundamentals and life sciences [43]. For example, the science provides specific frame and context for the application of mathematical concepts, and mathematics allows the cadets to deepen their understanding of scientific ideas providing tools to quantify and be able to explain science relationships, expressed in variables, equations, graphs, and charts [44].

Considering that motivation is a significant component within the personality structure and it is an integral part of educational and professional self-realization, we are to analyze the motivational sphere causing the goal-oriented and conscious character of actions. Also, this sphere, importantly, builds the purposeful process of cadets' personality development. Visual aids, frequent usage of STEM-technologies during the educational process while solving applied military tasks help develop necessary

perception abilities and create positive attitudes to non-standard approach within the educational environment at the higher military educational establishment. And, as a result, it leads to realization of the second pedagogical condition concerning creation of cadets' positive motivational attitudes.

Carrying out professional tasks depends on ability to perform creative independent activity that is adequate to professional content and requirements [45]. It means that future military officers' professional activity requires application of creative approach and, moreover, creativity is a necessary component of their professional competence. According to V. Tatenko [46], solving difficult professional problems needs searching for innovative techniques and making non-standard decisions. The more creativity one possesses, the higher level of competence it is because only creative process is responsible for finding fundamental patterns of professional activities, and personality's creativity helps future military officer become a leader within the professional environment.

Thus, activation of important personal motives is related towards motivation for self-improvement. Continuity of this process is maintained with the desire of personality to be a professional in the selected field. As a result, understanding the fact that professional experience, knowledge of theory and practice of professional activities is an indicator of professionalism. Also, these features constitute the basis for further development, self-realization and self-improvement of future military officer. Using creativity while solving applied military tasks is an important ability of future Armed Forces officers as it helps perform service duties properly.

Conclusions. We have explained the peculiarities of the process of formation of future military officers' readiness to use of STEM-technologies within their professional activities. And, on the basis of experts' estimations, we have found that to be efficient and viable, this process requires the creation of a number of pedagogical conditions at the higher military educational establishment. They are the following:

- strengthening training in life sciences with the use of STEM-technologies during lessons;
- creation of positive motivational attitudes towards non-standard approach to realization of educational process at the higher military educational establishment;
- activation of future military officers' self-improvement and creativity while solving applied military tasks.

Consequently, the researchers should focus on the enhancement of STEM-readiness among future military officers and development of effective methodical tools to improve their professional competence preparing to carry out service activities at a high level.

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THEORETICAL AND PRACTICAL ORGANIZATION OF RESEARCH AND RESEARCH ACTIVITIES OF FUTURE TEACHERS OF TECHNOLOGIES

Andrii Kryzhanovskiy,

Ph.D. of Pedagogical Sciences,

Municipal Institution of Higher Education

“Vinnytsia Humanities and Pedagogical College”,

Larisa Lanova,

postgraduate student,

Vinnytsia Mykhailo Kotsiubynskiy State Pedagogical University, Ukraine

Annotation. *The content of research activities of future teachers of technology is determined, the essence of its motivation is revealed. Possibilities of organization of search - research activity on the basis of researches of theoretical and practical features, and also use of project actions of students are considered. Theoretical and practical features of the organization of research activities as a system of education for the preparation of future teachers of technology for innovation in teaching are outlined.*

Keywords: *research activity, future teachers, patent, theoretical and practical features, research task, teaching system.*

Formulation of the problem. The vector task of higher education in the current conditions is the best training of well-educated teachers who are able to learn well, that deepening their knowledge could increase their theoretical and professional level. The formation of future teachers of technology research - research skills for independent learning becomes necessary to solve the problem. In this regard, special emphasis is placed on research activities carried out throughout the period of study at a higher pedagogical educational institution.

The technology of professional and pedagogical training of future teachers involves purposefulness, controllability, controllability, optimality of the educational process, ie such a process that can be reproduced and which leads to the projected result.

Reforming professional pedagogical education requires the establishment of fundamental pedagogical education, harmonization of ideological, methodological, didactic and psychological knowledge, which will allow the specialist to more fully implement the humanitarian, cultural function of education, to master innovative technologies of teaching and education.

Future teachers, along with the study of classical pedagogical heritage, join the prognostic educational models, gain pedagogical experience in various practices. Therefore, the training of specialists should be adequate to the demands of practice and at the same time more personalized, giving each student during the study period opportunities to deepen their training, master the basics of pedagogical skills, taking into account innovative technologies.

Analysis of previous research. The definition of "exploratory research" – is new, very few researchers have studied the essence of the topic. These were such scientists as I.B. Karnaukhov, O.P. Pavlenko, S.V. Goncharenko. The idea of research was introduced into the educational process, which helped students' learning activity, quick thinking, problem-solving thinking, which, as it developed, added to the need for independent research activities.

Information and communication technologies were studied by A.A. Andreev, V.M. Galuzyak, M.I. Zhaldak and others. It should be noted that the concept of "research" is quite new; it was considered by a small number of scientists, in particular I.B. Karnaukhova and O.P. Pavlenko. The concept of "research" we consider as an activity that provides the formation of scientific worldview in students, the development of creative thinking and individual abilities (activity in independent search, initiative, etc.), the formation of skills of independent research, theoretical knowledge in practice, expansion of scientific erudition, formation in them of procedures of creative cognitive search – new forms, methods, means of cognition of reality.

All the above forms, methods, means of cognition of reality are an integral part of the educational process of students and are implemented during practical classes and lectures. We understand the organization of research activities as a process of involving students in their mastery of methods and tools of scientific research; research planning (proposing hypotheses, developing a research plan to determine its object and subject); use of theoretical and empirical methods, study and implementation of various options for information retrieval, when all actions are aimed at developing didactic materials that can be used in future professional activities.

New information and communication technologies, based on the use of computer technology, involve obtaining new information, new knowledge; that is why their use in research is necessary. It is also worth noting the didactic potential of information and communication technologies that need to be implemented in the educational process, which is the emotional appeal of audiovisual capabilities, multimedia software aimed at improving the effect of clarity, making it attractive and understandable and increases interest in the material. which is being studied.

Research activities aimed at working with information, its search, analysis, structuring, transformation into a didactic product (each of these actions is implemented in the design and technological activities of students: organizational and preparatory stage corresponds to the search for information, its analysis, design and technological stage – structuring and transformation into a didactic product). It is information and communication technologies that automate most of these processes, facilitate and increase the effectiveness of research activities, can help to clearly and vividly present research results (especially at the final stage of project activities, presenting the finished product – the result of student project activities). educational and didactic programs, etc.

Having studied the real state of the organization of research activities and the use of information and communication technologies in this process by students, we proposed to include in the educational process of future teachers of technology information support of

the course, developed in Natata ebook compiler 3.0.3. Information support includes the curriculum, lecture material, laboratory and practical work, creative tasks, independent work, assessment of student learning activities, control questions and a recommended list of sources. Having introduced into our educational process the model of organization of research activities (based on the use of information support), we have recorded an increase in the level of academic achievement of students and the level of formation of research skills.

"The system of teaching on a research basis has been widely developed in foreign universities. It is known from the history of science and education that the views and activities of Wilhelm von Humboldt are a classic example and the first example of the introduction of a research-based learning system. His ideas about the unity of science and education date back to the early XIX century. The current understanding of research-based learning has been defined by the fact that thanks to this we now have a significant arsenal of developments in the methodology of application of research-based learning "[4].

The main purpose of our work is to substantiate the theoretical and practical features of the organization of research activities of future teachers of technology.

Presenting main material. Research activities of students are aimed at working with information and materials. Stages of design: information retrieval, modeling, structuring, transformation into a didactic product of activity, all this refers to the design and technological activities of students.

Implementation of new technologies in the educational process of the university is possible under the following conditions: personalized presentation of the material in terms of its historical formation and development (in the teacher's activity), emphasizing ethical and aesthetic values of educational material, emotional content and organization of students' cognitive activity. dialogical learning (cooperation) of teacher and student, variability of content and organization of student learning, using interactive teaching methods.

New technologies include: modular, computer, contextual learning, interactive teaching methods and rating system for assessing the results of cognitive activity of students (pupils), etc.

Note that the advantages of computer training is that the teacher is freed from the need to control each step of students in solving various cognitive tasks, has the opportunity to pay more attention to individual work with each, and access to the database allows you to adjust individual personality growth of each specific future teacher.

In general, the analysis and experience of new educational technologies shows that they are not all goals, but can radically change the educational and social motivation of students, develop their cognitive activity, independence and creativity, which, in turn, is an important condition for their professional orientation.

Formation of high-quality professional training of future teachers of technology for innovations in pedagogical activity, in the context of introduction and effective use of new pedagogical technologies, in particular project learning technologies - one of the priority tasks facing higher education institutions today. Implementation of project-

based learning, orients students to create a specific material or intellectual product. "Fulfilling the set problems, ideas in the process of project-based learning on the way to the goal of mastering a specific content or method of cognition, students update search activities, acquire the necessary competencies. Implementation of project activities allows future technology teachers to feel like an active actor. In the course of project activities, students develop the following skills and abilities: reflective, exploratory, collaborative work, managerial, design, communicative, presentation, etc. " [1, p.34]. "Project-based learning is based on research work on the basis of co-creation of students and teachers. This gives the teacher the opportunity to widely show creative abilities not only in pedagogical design, but also in the role of researcher, because it is impossible to transfer the experience of activities that he did not master himself. The transfer of practical skills sets the tone of communication on a par "colleague-colleague" [5].

Innovative actions of human diligence promotes renewal, through the processes of cultural and historical ideas of society, gives culture, as a philosophical rudiment, a special quality. Therefore, the issue of forming the project culture of future teachers is becoming increasingly important in pedagogical science and practice and requires repeated analysis and research. "Theoretical features (from the Greek – observation, research). Research – the search for new knowledge, or systematic research to clarify the facts; The study of what is not, as well as today, the study is to clarify the various key competencies that in modern pedagogy understand the complex qualities of personality, which include interrelated knowledge, skills, values, as well as willingness to mobilize them in the necessary situation. There are the following types of research: scientific, historical, patent, marketing. Based on the above, we distinguish theoretical features as an analysis of the scientific study of the decomposition of a complex phenomenon into components, simpler elementary parts and the selection of individual aspects, properties, relationships [5]. "Interest in scientific research has appeared for a long time, since the late XVII – early XVIII centuries. With the creation and development of the Kyiv-Mohyla Academy, one of the first to study and conduct research in Ukraine was: B. Paton, I. Pulyuy, D. Yavornytsky, A. Krymsky, M. Maksymovych, D. Zabolotny and many others.

On the example of biographies of the above scientists, we can see that curiosity and cognitive interest determine the lifestyle and behavior of scientists. As a result, extreme curiosity and the desire to solve literally everything or discover new things are common connections in the life of inventors [2]. The motivation of future teachers to invent new things creates the need to learn new facts, to carry out new analytical and synthetic actions in the learning process, because the world's largest innovative projects were created by young inventors Bill Gates, Steve Ballmer, Steve Wozniak, Steve Jobs, Steve Gulet. Dave Packard, Michael Zuckerberg and many others.

To encourage future teachers to the theoretical and practical features of the organization of research activities, one of the types of research is proposed - patent (V. Yurchuk).

An innovative approach to issuing patents for future teachers of technology will help further develop their creative potential. The algorithm for obtaining patents is as

follows:

1. Find an idea or object to explore and discover something new.
2. Define and set a goal that improves performance or has new actions of the object of study.
3. Determine how change can be achieved.
4. Define the section that provides information about our object.
5. Find several similar objects, based on, create your new one.
6. Identify analogues and prototypes and develop a new solution.
7. Write the claims.
8. Perform the description of the invention.
9. We apply to the patent attorneys of the university and fill in the application for the invention.

After filing an application, it takes a little time to obtain a patent, and what a joy it is for a freshman who receives his first patent, his first scientific publication. At the time of writing a bachelor's and master's degree, they may already have several patents, so the creative process grows into scientific and technical creativity and the joy of the result. Thus, becoming a student as an inventor allows in the future to make him a promising scientific and technical worker, scientist or teacher [3].

A good theory is a theory that is enshrined in practice, that is, human activity to achieve a certain goal. Scientific and practical work on the study of the peculiarities of the manufacture of different types of crafts for future teachers of technology is a particularly important phenomenon of study. After all, the professional competence of a teacher determines his pedagogical skills. "According to A.S. Makarenko, pedagogical skill is the knowledge of the peculiarities of the pedagogical process, the ability to build and set it in motion." "Driving" for a technology teacher is an important factor, so future technology teachers need to constantly seek innovation in their activities, to acquire not only knowledge but also skills and abilities to make different kinds of crafts. Without this, the teacher will not be able to conduct a master class and help the student to think creatively, improving their ideas and skills for making the designed product.

Crafts in the modern world have not lost their relevance and popularity. National motives, the experience of generations passed down through the millennia, and the skills of masters - all this happens in the products of folk craftsmen. Each product is the result of the creative thought of the master. Modern masters work with materials well studied by generations of masters, but at the same time inquisitive mind, folk ingenuity and imagination in the work push to study innovative methods of processing, creating unique works of folk art. To share knowledge and skills with a master, for a future technology teacher, it is necessary to show a desire to be there, performing synchronously the product of activity, asking about the incomprehensible, asking questions, thus moving to master any craft.

Thus, learning on a research basis as a type of learning has the following features: a set of student-centered goals of learning and teaching, which are implemented through scientific and practical research; teaching students to set special tasks that involve

the interpretation of experimental data, cases (tasks) for analysis or a set of real life situations/ problems to solve.

Based on the above-mentioned features of research-based learning, leading scientists identify learning objectives: the formation of knowledge about science; development of skills to determine the novelty and relevance of the study.

Theoretical and practical features of the organization of research activities for the training of future teachers of technology serves as a system of education. Each training system has its own method:

- research activities aimed at solving independently posed issues in the little-studied field;
- search for new knowledge, solving the research task set by the teacher;
- situational analysis of scientific research through the verification of their evidence using their methodology [4].

The research-based learning system forms in the student an understanding of the value of research work, which is saturated with professional training, short-term qualitative research, which develops psychological innate qualities, critical and analytical thinking, learning to solve research problems, and develops skills for professional activity and personal development, which has a positive impact on learning outcomes [4].

Throughout life, a person grows professionally, there are qualitative changes, which are influenced by objective and subjective factors. The influence of the environment and personal activity of the subject in professional development is crucial. In the period of mastering the profession, an important factor can be considered the qualitative acquisition of professional knowledge, skills and abilities in the course of professional training and conscious professional realization of the individual after graduation from a pedagogical educational institution. An indicator of the actual professional activity is the socio-professional achievements in the process of working in the profession, the progress of professional qualities of the individual. The task of a higher pedagogical educational institution is to lay the foundation of professional development.

Today, information and communication technologies, as a set of modern methods and means of obtaining and processing data are transformed into a lever to increase the efficiency of the educational process and its management. Given today's requirements, primary school teachers must learn the basics of economic knowledge, have a high general culture, have skills of organizational and educational work, a foreign language, show initiative, be responsible, strive for self-improvement and self-education, innovate and, most importantly, to acquire skills in working with computer technology.

Therefore, the use of information and communication technologies in the training of future teachers of technology should not be limited to the study of only the subject itself, but should penetrate into the humanities. The idea of the possibility of using ICT should be formed in the process of studying the entire cycle of disciplines, regardless of their specifics; the amount of information about ICT and their content should be significantly differentiated according to the direction of learning.

Modern education requires teachers who have the knowledge and skills to use

information and telecommunications technologies in their professional activities, formed by information competencies. To solve this problem, you need a teacher who has sufficient skills in the field of information and communication technologies. Today, the teacher has lost the monopoly on knowledge and is forced to change their own competencies, such as learning to organize access to information resources, use a password, e-journal, conduct testing and more. Obstacles to the personal development of the teacher and his professional growth are not lack of time, but the priority of forming new competencies. Therefore, from the point of view of the future specialist's readiness to perform his professional activity and taking into account the specificity and complexity of the pedagogical process in primary school, we will focus on the problems of forming information competencies and information culture foundations of future teachers.

Conclusions. In our opinion, the use of theoretical and practical features of the organization for research activities in the training of future teachers of technology as a system of teaching on a research basis can provide a new impetus to bring the higher education system of Ukraine to a higher level. We found that the use of research activities (which should be based on the educational process) in the training of future teachers of technology will help to improve skills and expand the functionality of the specialist. The results of our research work confirmed the relevance of the topic of our study.

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ETIOPATHOGENESIS OF PSYCHOPATHOLOGICAL DISORDERS IN A MULTIMODAL APPROACH

Serhii Puhach,

*Ph.D. in Pedagogy, Associate Professor,
West Ukrainian National University,*

Inessa Vizniuk,

Doctor of Psychological Sciences, Professor,

Serhii Dolynnyi,

*Doctor of Philosophy (Ph.D.),
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine,*

Marianna Paykush,

*Doctor of Pedagogical Sciences,
Danylo Halytsky Lviv National Medical University,*

Victoria Kylyvnyk,

*Candidate of Pedagogical Sciences,
Communal Higher Education Institution
«Vinnytsia Humanities Pedagogical College», Ukraine*

Annotation. *The article focuses on the behavioral mechanisms of psychopathological personality disorders and their basic principles of psychodiagnostics. The list of symptomatic features of disorder in the conditions of differential similarities and differences of individual and general indicators of psychodiagnostic principles is specified. General scientific methods were used in the study of various sources and literature, in which case it was possible to reproduce the real facts of the problem under study, taking into account the scientific achievements of domestic scientists. The analysis of determining the etiology and development of psychopathological nosologies in the group of patients with the most pronounced pathophysiological symptoms is substantiated. The complexity of the coverage of the basic principles of diagnosis is characterized by the multimodality of methods of collecting information on the etiology of the disease. In its context, the ability to integrate information obtained by different methods is taken into account. It should be noted that according to the normative indicators of correlations there are differences in the formation of personal balance in the case of the integrity of the human body. It has been established that somatic pathology has different intensity and different types of interaction: some correlations are strengthened, others are extinguished. It is indicated that during the disease there is a restructuring, change of information and energy components of the state.*

Keywords: *psychopathological disorders, somatic diseases, mental states, correlations, experiences, emotional disorders, nosology, somatopathy, somatotonia.*

Introduction. The transition from one system of socio-economic relations to another is always associated with significant difficulties. The specificity of psychological problems of modern times is determined by the need to study and analyze the processes taking place in Ukraine. In society there is an active and painful process of breaking personal stereotypes of traditional forms of behavior, values that are undergoing

significant changes in modern conditions. Currently, one of the destructive factors in the deformation of the integrity of the creative organization of citizens are psychopathological disorders. All this requires from the individual psychological stability and tolerance. Deterioration of the ecological situation, increase in the number of socially conditioned stressors, increase in the number and scale of man-made disasters, the emergence of a number of new pathomorphoses and existing destructions, causes uncertainty about their etiopathogenesis.

The mechanism of origin of psychopathological personality disorders is primarily manifested in human life and depends on his financial status, individual personality orientation, professional suitability, socialization, spirituality, etc. Secondary factors are the somatization of the hierarchy of a number of human needs, which reflects his inner desire in compassion and increased attention from others. The unresolved question of the genesis of psychopathological nosology is the primacy of the psychotropic factor or symptom complex of internal organic changes in the body. Вихідні передумови.

Various psychodynamic theories postulate the possibility of psychopathological disease through pathological changes and further conversion of mental energy into "energy of innervation", which leads to functional and later to organic disorders of internal organs. Thus, such pathologists as G. Beard, J. Charcot and F. Raymond and others mention psychopathological disorders for the first time in their scientific publications. They indicate a certain neurotic symptom with the presence of anxiety-phobic disorders. The expansion of ideas about the mental organization of the individual has led to the fact that neurosis has been seen as a pathological reaction caused by obsessions, phobias, emotional discomfort and stress. The next step in the diagnosis of somatoform disorders was the differentiation of clinical neurosis into hysteria, hypochondria and neurasthenia. Thus, psychosomatic health disorders have a destructive effect on the social mood of the individual and his professional growth [3, 4].

Psychocentric concepts were developed by both representatives of the psychosomatic and cortico-visceral directions. I. Pavlov's theory of "experimental neurosis" considered the possibility of somatic disease due to excessive or prolonged stimulation of the nervous system; psychophysiological basis for the formation of pathological conditioned reflex is the zone of extreme inhibition (stagnation), which is formed in the CNS [2].

V. Marischuk, speaking about the mental factors that affect health and lead to disorders of the nervous system, cardiovascular and other diseases, usually notes the negative role played by the lack of negative emotions, frustration, leading, in particular, to disturbance of hormonal balance of an organism (emergence of excess of adrenaline and noradrenaline). But considerable damage is caused by incontinence of emotions, which forms a violation of the microenvironment, resulting in a weakening of the emotional background of the characteristics of man [4].

There is a need to identify and specify the relationship between professional requirements and personal potential; in identifying factors that would contribute to the preservation of human psychosomatic health, personal development and self-development in professional activities. The above determined the purpose and objectives

of our further study.

In the context of L. Kulikov's views, psychosomatic disorders are a form of protection against social conflicts. According to him, there are seven categories of social roles of the individual: the role of family ties, roles in friendly and intimate personal communications, the role of social and legal status, job status, professional roles, user and owner roles, official business roles. spheres: on rest, in gardening, in tourism, physical culture classes as a result of which imbalance in the psychosocial sphere of the person is formed [5].

S. Freud's theory foresaw the possibility of the formation of "organ neurosis" due to the shift of energy of unconscious conflicts - in the sphere of functional and anatomical formations ("conversion to the organ") [3]. A. Adler's concept of symbolic language of organs is quite close, which is based on the assumption that the corresponding organ systems can specifically reflect mental processes [1]. F. Alexander in his concept of specificity abandons the symbolic interpretation of organic visceral pathology. The development of autonomic neurosis is regarded as a consequence of "unconscious conflicts" that arose due to the neurotic development of the child; at the same time emotional tension, without receiving a discharge on the external plane, causes persistent changes in the autonomic nervous system, the formation of irreversible organic changes in the organs. Recalling the famous scientist I. Pavlov, we recall that "for a true scientific understanding of neuropathological symptoms and successful control of them, we must forget about the differentiation of mental from somatic. It is usually necessary to give preference to the physiological formation of pathogenic agents and, especially in relation to reactions to them with all their consequences [2].

However, none of the theoretical approaches, trying to explain the pathology and pathogenesis of psychopathological disorders and somatic destruction, do not reveal the primacy of their origin. That is why it is necessary to substantiate in more detail their multifactorial genesis, which reflects the essence of theories of etiopathogenesis.

Formulation of goals. The purpose of the article is an empirical study of the relationship between somatic disease and psychopathological disorders. The hypothesis of our study is the selection of somatic factors in the formation of psychopathological disorders. We wanted to prove that the significance of any disease, regardless of its genesis, causes the development of obsessions, fears, delusions about the severity of the condition. However, we do not focus on the differential differences in the characteristics of each disease, but present more generalized trends of this etiology, which will emphasize the somatic nuance in the formation of the picture of psychopathological disease. The main task of our work is the interpretation of data that will indicate the signs of psychopathology as an independent nosology or a number of concomitant symptomatic pathological disorders.

The theoretical and methodological basis of research is also formed on the principles of objectivity and scientific, systematic and integrated approaches. Objectivity in the coverage of the topic, which was put into effect by impartial, non-opportunistic sources, based on the presented research elements and reliable, verified information from our

study. At the same time, we did not avoid critical convicts and evaluated psychodaromatic problems in genesis psychopathological mechanisms for a realistic presentation.

Presentation of the main material of the study. In foreign psychiatry, the conceptual justification of somatoform-type psychogeny, general neuroses, psychopathological manifestations with predominant autonomic disorders is associated mainly with psychoanalytic interpretation of the unconscious intrapsychic neurotic complex [1 - 5]. The origin of symptoms that mimic bodily pathology is explained by the mechanisms of conversion as a result of the lack of adaptive psychological protection.

The complexity of the coverage of the basic principles of diagnosis of our study is characterized by multimodality of methods of collecting information on the etiology of the disease. In its context, the ability to integrate information obtained by different methods is taken into account. In particular, we focused on the disclosure of the following structures: biological prerequisite includes biochemical, neurophysiological, psychophysiological spheres; in the foreground are taken into account somatic processes that can be recorded by physical or chemical means; mental (psychological) prerequisite focused on the inner individual experience and behavior (including activities) of the individual; social precondition produced by interpersonal interaction in society (social conditions, family situation); ecological precondition: in this perspective living conditions, material security, quality of life are considered.

The experimental base of the study was the Vinnytsia Regional Clinical Hospital named after MI Pirogov and the Vinnytsia Regional Psychoneurological Hospital named after Academician OI Yushchenko. The empirical study involved 53 patients with VOCL. MI Pirogov, 56 patients - from a psychiatric hospital and 11 patients - in an outpatient setting (in the sanatorium-type department), of which: men - 65, women - 55. The number of experimental group meets the requirements for the sample size, which can subject to statistical processing. The prerogative of this sample is that both groups have complaints of a psychosomatic nature, in the formation of which the primary feature is an unknown mechanism of development of hypochondriac disorders - somatic or psychological factors.

Psychopathological symptom complex usually manifests itself in various forms, the essence of which is mainly that patients attribute to themselves non-existent in reality severe, incurable diseases. Hypochondria is a related concept of this syndrome, in the aspect of which it is worth focusing on hypochondriac symptoms or conditions, which usually have different etiology and mechanisms of development. Note also that hypochondriac disorders are presented in the form of symptoms such as fear, depression, sadness, longing, anxiety, apathy, neurosis, indifference, tension, uncertainty in the symptoms of the disease, etc. [4, 5].

Psychopathological disorders are a symptomatic mental disorder or personality trait characterized by an obsession with the presence of difficult, anxious, often unfounded, thoughts for any reason.

The clinical diagnosis of psychopathological disorders was determined according to the research psychodiagnostic criteria in the section of the International Classification

of Diseases 10th revision (ICD-10: class V. Mental and behavioral disorders) and DSM-V diagnostic criteria: F45.0 – psychopathological disorders. Expert assessment and interview (Structural interview with Otto Kernberg) were also used.

In the first stage of the study, a psychodiagnostic interview was conducted to determine the psychological mood during this time in the subjects. In fact, the interview procedure was formed on the basis of experiencing the current state of man at present in a certain sociological space. According to the results of this stage, the respondents had the following psychological states: tension – 27 people, anxiety – 23 people, fear – 13 people, uncertainty – 8 people, sadness – 8 people, loneliness – 6 people, apathy – 6 people, indifference – 4 people, depression – 3 people, instability – 3 people, pleasure – 1 person. Of course, we did not rely on their small number in the study, but the general picture of reasoning highlights the predominance of a negative emotional background in their worldview.

These indicators show that psychopathological conditions are the cause of somatic diseases such as (according to individual medical records): hypertension – 21 people, peptic ulcer – 19 people, pyelonephritis – 15 people, coronary heart disease – 14 people, ischemic stroke – 11 persons, duodenal ulcer – 9 people, acute pneumonia – 7 people, exacerbation bronchitis – 6 people, chronic renal failure – 4 people, chronic heart failure – 3 people, liver cirrhosis – 1 person.

The results obtained are shown in the table below.

The table shows that the experience of mental states, according to our sample of individuals, has no specific attachment to a particular somatic disease. Based on the first stage of our empirical study, the following facts were established:

- 1) patients with somatic diagnosis experience mainly mental states of the hypochondriac type;
- 2) emotional moods that accompany somatic diseases are not directly related to the specific diagnosis and in this sense can be considered non-specific, ie the typology of hypochondriac symptoms is characteristic of any of the somatic diseases;
- 3) patients with somatic diagnosis tend to be careful about their own emotional states, they differentiate them in more detail, which indicates the primary importance of these conditions in comparison with patients of the spa department of the OI Yushchenko Psychological Dispensary.

As A. Prokhorov notes: "Mental states, due to their integrating function, form a" psychological portrait of the individual ": processes - states - properties that unfold in the social functioning of the subject and the situation of life." The states are manifested in the form of macro- or microforms [3].

Human life, depending on the specific life situation, includes the nature of human behavioral strategies and tactics. It is they who distinguish it from other people and are determined by the landmarks in the experiences of their own universe. Specific models of macroforms of an individual's life can be such manifestations as "norm", "crisis", "pathology" and so on. In other words, normal conditions - crisis (transitional) conditions - pathological conditions (diseases). Note that it is the "norm - the disease" can establish

the most contrasting features of the dynamics of the psychological state [1].

Table 1

The ratio of hypochondriac disorders and somatic diseases

psychological states somatic violation	Tension	Anxiety	Fear	Uncertainty	Anguish	Sorrow	Solitude	Apathy	Indifference	Depression
Ischemia	+									
Hypertension				+						
Stroke										+
Pyelonephritis		+								
Peptic ulcer		+								
Pneumonia		+								
Duodenal ulcer					+					
Hypotension	+					+				
Bronchitis	+									
Gastritis		+	+			+				
Chronic renal failure			+							
Chronic cholecystitis				+						
Heart failure									+	
Nephritis						+			+	

Our research in the second stage was devoted to the identification of these patterns. The study was conducted with the above groups of individuals. Individual work was conducted with each of the respondents. In the course of this work, they were asked to assess their condition according to the questionnaire "Base of psychological states", developed by A. Prokhorov. The questionnaire included scales of mental processes, physiological reactions, experiences and behaviors. A total of 40 indicators according to 10 standards for each of the parties experiencing the condition. In the instructions, it was proposed to mark your condition at the current time on an 11-point scale (we followed it in the first stage of the study). It is important to note that this questionnaire was developed in accordance with the concept of "unequal states", which is recorded in the presentation and interpretation of results: it is suggested that indicators within the norm of 5 ± 0.5 points indicate the balance of psychological state (mental health). Deviations from this norm indicate a tendency of pathological (obsessive) states either towards their exacerbation and reactivity (high rates), or, conversely, towards depression and loss of sensitivity and flexibility (low rates).

Agreeing with A. Prokhorov's hypothesis about the norms of optimal functioning of

the human body, we note that according to our research, psychological balance depends not on the state of morbidity, but on the experiences they experience during the disease. These experiences are usually associated with the appearance of hypochondriac disorders, which emphasizes the secondary nature of the latter, namely their manifestation in the form of a number of symptoms. Let us turn to the results of the questionnaire (see Table 2).

Table 2

Dynamics of experiences of hypochondriac disorders

Scales	Patients with the number. E. Pirogov	Patients with medicine. OI Yushchenko
Mental processes	0,792	0,854
Physiological reactions	0,653	0,716
Emotional experiences	0,698	0,754
Behavior	0,774	0,631
Total	0,729	0,739

Note - the correlation is significant at the level of $p \leq 0.01$

Analysis of the structural and functional organization of mental states revealed the following features. According to A. Prokhorov, all components of states correlate within the norm at a high level of significance, forming an integral functional complex. The highest correlation was established by him between mental processes and behavior ($r = 0.766$ at $p < 0.01$). Based on this, we used the Vikhand method to build a galaxy in which processes and behavior were the central parameters. Physiological reactions were associated with processes and experiences with behavior.

Determining the indicators of experiences for each of the groups showed similarities between them in terms of strengthening hypochondriac mood, which suggests a low level of vitality in respondents, despite the psychogenic and somatogenous factors of origin of nosology.

Let's consider mental processes according to which patients with the somatic list of symptoms as a whole showed much higher indicators on the registered parameters in comparison with norm. Patients with psychopathological status slightly exceed their numerical expressions. In general, there is a tendency to imbalance at the level of psychosomatics. We emphasize that in determining these or other parameters, we do not mean the psychological or somatic factors of the disease, but the experience of their importance in human life, ie hypochondriac intentions.

The indicators of the values of attention, perception, thinking and imagination in relation to the picture of the disease development were especially high. The variability of experiences deserves considerable attention. As we have already noted, the vast majority of patients experience asthenic moods. In these groups, the pathology rates range from $5 \pm 0.5 - 0.79 - 0.854$, which is due to misunderstanding of the disease, inability to think in optimistic positions and choose favorable ways to overcome these conditions.

Psychogenic pathological reactions are observed in patients with true somatic diseases in the form of hypochondriac nosogens, which determine the picture of the disease. It is known that the occurrence of these reactions depends on the predisposition to this type of reaction, which is attributed to somatopsychic accentuations, characterized by increased suggestibility of their own health. Initially, such accentuation manifests itself in the form of somatopathy, which means asthenic personality with a tendency to pathological sensations and identical self-observations, later - somatonia, which is characteristic of wall expansive individuals with a desire for physical improvement, constant recovery. This type of behavior is also common in anxious and distrustful people, in whom these disorders are obsessive, often in the form of panic attacks.

A distinctive feature of these reactions are relatively short-lived, sudden occurrences. They occur with a very pronounced emotional color. Patients are usually anxious, they are afraid of falling victim to a serious incurable disease and are in a hurry to tell the doctor about their own assumptions about the severity of the disease. They are often gloomy, irritable, uncommunicative, tense, and sometimes striking with their suicidal intentions.

We did not observe statistically significant dependences in relation to the type of somatic disease.

Let us now consider the physiological component of experiencing states. The highest rates were observed in the group of persons with psychopathological status (0.716), who are in a state of wall experiences. They have high rates of temperature, muscle tone, coordination and motor activity. In addition, they have the lowest variability of physiological parameters for all parameters of this scale. The high rate in itself indicates that, normally, wall conditions tend to have a greater impact on physiological parameters than on somatic abnormalities. Thus, it can be argued that psychopathological suggestions are a prerequisite for the development of psychosomatic pathology, which in this case is a secondary factor in the genesis of psychopathology as an independent progressive nosology.

In second place (0.653) are patients with somatic diagnosis. They have a higher level of variability, however, which does not depend on the type of disease, nor on the type of experience, nor on gender, nor on age. In any case, the variability indicators of our sample of individuals do not correlate reliably with any of these parameters. This suggests that the deployment of special clinical measurement studies should focus on individual development options.

It should be noted that only in physiological parameters the experience of asthenic states by somatic patients approaches the value of the norm, ie in their psychological dimension we find similarities of behavior with healthy people, whose behavior is described by the author of the questionnaire A. Prokhorov.

According to the indicators of emotional experiences, persons with psychopathological status are the most important (0.754). They have particularly high scores on the scales "sadness - joy", "sadness - optimism", "passivity - activity", "tightness - looseness". On the other hand, the lowest values are observed for the values of A. Prokhorov in healthy

individuals (0.451) who have asthenic experiences. Particularly low digital values on the scales "sleepy - cheerful", "sluggish - alive", "sad - cheerful".

In patients with somatic diagnosis, the overall rate is quite high (0.698), ie in the corresponding dichotomies, the balance is still shifted towards active manifestations. The highest rates here are on the scales "sadness - optimism", "passivity - activity". The analysis of the scatter of experiences shows that the indicators with somatic diagnosis differ in the greatest variability.

Patients with somatic manifestations of the disease have the highest rates of "behavior". On the one hand, these indicators are considered the best, as the scales of this part of the questionnaire are built in such a way that higher scores are given on characteristics that describe more adequate and regulated behavior. On the other hand, a high figure (0.774) indicates a significant deviation towards the imbalance of states.

Somatized disorders (somatogeny) are characterized by polymorphic pathological bodily sensations. The latter are presented in the form of algae, which vary in intensity from subjectively insignificant, which do not lead to seeking medical help, to severe, acute algopathic phenomena. Along with this, in somatized disorder there are autonomic manifestations that mimic urgent somatic diseases and functional disorders of internal organs and systems (tachycardia, biliary dyskinesia, etc.). The occurrence of somatized disorders is usually associated with psychogenic factors and is realized by the mechanism of reactive lability. The total duration of these reactions is usually not more than 6 months.

Behavioral symptoms of hypochondria are characterized by anxiety about their health, which leads to changes in the patient's behavioral model. In some cases, the disease causes social isolation and significant difficulties in the patient's life. The tendency to constantly discuss their imaginary illnesses and to fully immerse themselves in caring for their condition leads to psychopaths being avoided by co-workers, friends and even family members. Psychopathy is often the cause of family divorces.

When experiencing states of suggestion in the conditions of somatic disease, the picture changes. In our sample, all states were asthenic, but their experience occurred according to parameters similar to the experience of normal wall conditions (with a high correlation of modality "wall - asthenic" at $r = 0.818$ with $p < 0.01$). We associate this with the process of mobilizing the body's defenses and creating its own, more optimistic semantic space. It should be emphasized that in somatic diseases, not all correlations between states and their experiences are significant. The greatest significance was observed between physiological reactions and experiences ($r = 0.827$ at $p < 0.01$). In the case of the norm, this relationship is lower ($r = 0.569$). However, physiological reactions are strongly associated with behavior, which is also characteristic of healthy people. The analysis shows that the central dimension of the experience of somatic patients is mental processes and physiological reactions. Mental processes are mainly related to behavior, and experiences are related to physiological reactions. From here it becomes clear the emergence of psychosomatic disorders and neurotic disorders due to somatic diseases. In the case of representatives of the group of psychopathological status, it should be noted that their behavioral parameters (0.631) differ slightly from the norms and results

of persons with somatic diseases.

Thus, in the experimental groups there is a difference in the level of intensity and different levels of interaction: some correlations are strengthened, others are extinguished. We believe that in the case of disease there is a restructuring, change of information and energy components of the state of optimal functioning of the human body. The results of our study suggest that somatic disease does not directly simulate the relevant conditions, and the process here is quite complex and indirect. Changes occur in the moods (in their individual components), and only then is the formation of new forms of experiencing states.

The relationship between psychological resilience and stress levels was measured experimentally, as measured by the Hopkins Symptom List (HSCL-25). It turned out that a high rate of life stress is not a constitutional prerequisite for disease. In people with high levels of subjective stress, low levels of psychological resilience are a predictor of somatic destruction (the probability of disease is currently 92%), while high levels of resilience contribute to good health (somatization took only 10%). In addition, a high level of psychological stability of the individual is associated with a developed imagination and creativity in unusual situations, with a high level of stress. Adequate awareness and assessment of the situation, sustainable experience of one's actions and circumstances, which are the result of personal choice and responsibility, in somatically ill people with high vitality acquire the value of resources, experience to adapt to health problems, harmoniously transforming meaningful life orientations.

Conclusions and further prospects of research. Thus, the current ambiguity of psychopathological interpretation of conditions qualified within neurotic psychopathy is reflected in the heterogeneity of these disorders in modern classifications. One of its manifestations is hypochondria as an exaggerated concern for one's own health and a belief in the existence of a disease, contrary to argumentative medical research. Psychopathological disease can be both an independent nosology and a symptom in the structure of a serious illness. In the first case, the disease is called a psychopathological disorder. In the second case, it is one of a number of symptoms. If this symptom dominates in the clinical manifestations of the disease, then it forms a psychopathological syndrome.

In the process of life hypochondria characterizes human behavior in the environment. Among its main manifestations are increased anxiety, depression, apathy, lack of trust, sentimentality, sadness, gloom, fear of the future, bad mood and more. The hypothesis of our study is confirmed in the fact that the basis of the formation of somatic diseases is really the central formations are experiences, as a prerequisite for the development of obsessions, delusions, discomfort zones, and so on. Thus, psychopathological disorder is a serious psychological disorder of the optimal functioning of the human body, which requires a professional approach and treatment.

Further research can be aimed at diagnosing psychopathological experiences of individuals with psychosomatic diseases, their attitude to the disease and finding effective ways of psycho-corrective action.

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FOREIGN LANGUAGE COMMUNICATIVE AND INTERCULTURAL COMPETENCIES AS THE CORE OF OFFICERS' SUCCESSFUL OPERATION IN INTERNATIONAL ENVIRONMENT

Ievgeniia Ivanchenko,
Doctor of Pedagogy, Professor,
Volodymyr Suslov,
Senior Lecturer,
Alona Storozhuk,
postgraduate student,
Military Academy, Odesa, Ukraine

Annotation. *Foreign language proficiency and intercultural competence considered to be valuable and advantageous skills for the service members of the Armed Forces of Ukraine. The Ministry of Defence of Ukraine has recognized the significance of foreign language communicative skills for its staff. Knowledge of the most commonly used foreign language, which is English for Ukraine's military partner countries, and understanding of foreign culture is critically important for the successful implementation of international military activities. The thesis is that an understanding of language and knowledge of culture are critically important individual characteristics of modern officers involved in international military activities. Officers' successful functioning in international operations depends on their readiness to perform duties in multicultural and foreign language speaking environment.*

Since language is an integral part of culture, learning a foreign language means that cultural awareness is acquired at the same time. Consequently, foreign language communicative and intercultural competencies are interrelated abilities which supposed to be formed and developed simultaneously. The Armed Forces of Ukraine must educate and sustain a language trained and culturally oriented officers' corps in order to remain prepared to face the challenges of future international military activities. Thus, a modernization of the curricula of the Ukrainian higher military education institutions has to be made in order to focus English learning on the target foreign culture and developing future officers' foreign language communicative and intercultural competencies.

Keywords: *communicative competence, intercultural competence, foreign language, international operations, military education and training.*

Generally, the whole military sector can be described as a large multinational, multilingual, and multicultural company comprising diversity of ethnoses, motives, values, norms, etc. At the global and at the local levels, which often means respectively international and national ones, it is a workplace where service members are involved into individual professional interaction, institutional advancement and achievement, and where they show and exert national and international power (Orna-Montesinos, 2013, p. 99). From the other side, it is well known, and historically proven that military operations by their nature can only be successful when people involved in them are able

to communicate and work together.

Beyond doubt, the ability of the Armed Forces of Ukraine to operate effectively together with its allies and partner nations is fundamental to promoting to regional and global peace and security. Today's complex challenges steadily foster different countries to work with or even through others: enabling allied and partner capabilities, building joint capacities and developing mechanisms to share the possible risks and responsibilities.

In modern security sector interoperability is considered to be one of the key elements which help all the stakeholders to work effectively together in joint operations. For example, NATO defines interoperability as “the ability to act together coherently, effectively and efficiently to achieve Allied tactical, operational and strategic objectives” (NATO AAP-06, 2021).

However, ensuring interoperability with partners in foreign language speaking and multicultural environment often proves to be a complicated and severe challenge, basically due to the insufficient foreign language proficiency of the personnel. As English language has undoubtedly become the lingua franca in the military and its predominance as the preferred language of the personal and professional development is widely confirmed (Orna-Montesinos, 2013), in context of this study foreign language generally refers to English.

Many experts agree that interoperability is supported primarily by the ability of service members of different countries to interact, connect and communicate, exchange information and data. Therefore, developing communicative skills, enhancing foreign language proficiency and intercultural communication abilities, as well as other associated with them professional and individual competencies of servicemen can be considered to be a key issue for the success of international military activities.

The Ministry of Defence of Ukraine considers the knowledge of English as an integral part of a new officer's corps military culture based on Euro-Atlantic values and principles. As well the Ukrainian higher military command determines the foreign language proficiency of servicemen as one of the main aspects of achieving interoperability with NATO structures (The Road Map of Improving Language Training, 2021). Nowadays English language learning is mandatory in the system of professional military education in the Armed Forces of Ukraine.

As for NATO, presently linguistic interoperability is admitted as the core component of effective international communication of military personnel and NATO Standardization Agreement 6001 provides NATO forces with a table describing language proficiency levels of the commonly-recognized language proficiency skills: “listening”, “speaking”, “reading”, and “writing” (STANAG 6001, 2014).

At the same time, there are authoritative scientists in the field of Behavioral and Social Sciences who advocate for the adoption of a “culture and language strategy” for the military education and training involving not only the development of language proficiency, but culture awareness and expertise as well (Abbe, 2008). In their studies the concept “culture” has numerous meanings and is often defined as a pattern of beliefs,

value systems, rituals, behaviors and practices that have an impact on the individual and the organization. Therefore, individual's roles in an organization must be considered in capacity building efforts. Individuals whose norms are different, even if the nation's government structures, technology base, and human technical capacity are similar, may not readily accept solutions and concepts that rest on Western norms (Morgan, 2002).

Actually, foreign language teaching at Ukrainian higher military education institutions is professionally oriented and integrated into the special disciplines. The process of teaching English is designed accordingly to cadets' needs which are determined by their future military occupation (Jaros, 2018). The actual main objective of English learning at higher military education institutions is acquiring foreign language communicative skills and professionally oriented foreign language communicative competence by future officers. However, presently, it seems that there is no strong emphasis on the incorporation of cultural awareness programs, teaching modules, etc. into the curricula, and designated intercultural competence development efforts are not sufficiently implemented as well. In fact, intercultural training is not delivered during military education and training, except specialized courses for service members selected for participation in peacekeeping operations, multinational exercises and other international military cooperation activities.

Additionally, modern pedagogy concepts "intercultural communication", "foreign language communicative competence", "intercultural competence" and some other terms relevant to this study have different and sometimes controversial definitions which sometimes can vary due to the peculiar features of the language used for the explanation of their meaning. Thus, in the context of the presented research, it appears appropriate to provide the most common scientific approaches and views on the issues being considered.

First of all, it worth mentioning that asserting that "culture" is an area of knowledge or expertise separable from language, and that we might attain knowledge of the former without the latter, is likely unsupportable proposition. The two are of course intimately related, and can only be effectively learned together. Attempts to separate the two produce an overly academic, highly generalized type of knowledge that may hardly find a practical implementation. This approach has largely been discredited in the broader field of anthropology (LeVine, 2001).

Academics tend to agree that foreign language and cultural education are complementary; an appreciation of culture facilitates foreign language competency, and speaking a foreign language facilitates the in-depth understanding of culture (Joint Doctrine Note 1/09, 2009, p. 1–3). However, there is some debate as to whether each of the two competencies is "essential" for learning the other (Stringer, 2009). According to Patrick R. Moran, author of *Teaching Culture: Perspectives in Practice*, it is not necessary to master a language in order to build cultural competency; however, learning a language can serve as a "critical step" in understanding culture. Moran says: "Making the effort to understand another language, listening, negotiating meanings, all these facets of communication through language demonstrate respect, which allows the learner to engage in an authentic inquiry into a culture. As the process builds, relationships emerge.

And relationships become the foundation for meaningful cross-cultural engagements” (Moran, 2001).

Some believe that the teaching of culture should be an integral part of foreign language instruction. For example, in an article titled “The Importance of Teaching Culture in the Foreign Language Classroom,” Dimitrios Thanasoulas argues that cultural awareness must be viewed as “something more than merely a compartmentalized subject within the foreign language curriculum.” Instead, says Thanasoulas, culture must “inhabit” the class-room and “undergird every language activity” (Thanasoulas, 2001).

But, according to UK Joint Doctrine Note 1/9, culture does facilitate the use of language, and “linguistic skills facilitate the gaining and exploitation of cultural knowledge.” However, while linguistic ability does not guarantee knowledge of culture, “all personnel can benefit from enhanced cultural capability.” According to this perspective, “It is possible for a relatively high level of cultural capability to be achieved with limited language ability. However, to be an effective linguist, a reasonable level of cultural capability is required in order to maximize the opportunities presented through direct engagement” (Joint Doctrine Note 1/09, 2009, p. 15–16). Colonel Brett Lewis, author of “Developing Soldier Competency,” agrees, but for more practical reasons. He argues that foreign language proficiency is not an essential component of cultural competency because “not all soldiers have the aptitude to learn another language,” too much time is required to develop and maintain proficiency, and secondary options, including translators or technology in the form of “near-universal language translations” on hand-held devices or laptops, are usually available (Lewis, 2006).

The US Army’s Training and Doctrine Command (TRADOC) Culture Center defines culture as a “dynamic social system,” containing the values, beliefs, behaviors, and norms of a “specific group, organization, society or other collectivity” learned, shared, internalized, and changeable by all members of the society (Culture Education and Training Strategy for the U.S. Army, 2007).

At West Point, the newly created Center for Languages, Cultures, and Regional Studies takes a broader approach. While accepting TRADOC’s fundamental definition of culture, the Center for Languages, Cultures, and Regional Studies looks at language, culture, and the knowledge of regional dynamics as vitally interrelated and equally important aspects of intercultural effectiveness. Such effectiveness requires a skill set that encompasses language study and the cultural awareness it engenders, as well as cross-cultural competence through language and other cultural training, and knowledge of regional dynamics and how such knowledge relates intrinsically to both the culture and language (Wolfel, 2008).

Actually, starting as early as 1967, Robert Lado stated that “a central objective in the process of teaching and learning foreign languages should be the development of the competence to use the acquired foreign language in the target cultural environment” (Lado, 1967, p. 68). However, neither the audio-lingual, nor the communicative-pragmatic approach, which dominated the process of teaching/learning foreign languages in the 1970s and 1980s, did not address this objective, continuing to be restricted to

the linguistic aspect and the speech acts, considered to be universal in using a foreign language (Niculescu et al., 2019).

Currently, in foreign language teaching and learning the concept of intercultural communication has become a dominant one, supposing a rethinking of the whole process. Intercultural communication is seen by scholars as “communication between [...] two people from two obviously different groups” (Apeltauer, 1997, p. 17); a situation of interaction when interpersonal communication is conducted between members of different cultural groups (Litters, 1995, p. 20). Some other authors emphasize the fact that intercultural communication studies the contact between individuals, and not between the cultures they are affiliated to.

While being defined in different ways this concept has two essential features which are determined by most scholars:

- 1) intercultural communication is considered as a process of interaction between people who are aware of their cultural differences;
- 2) communication is interpersonal, direct, unmediated.

Scientist-educators note that in the didactics of foreign languages, the concept of intercultural communication refers mainly to the concrete teaching and learning situation, which is defined as an encounter between the culture of origin and the target culture. The transition from the culture of origin to the target culture is often fraught with stress as it involves a split from the familiar cultural matrix regarding the identity of the individual. Brandusa-Oana Niculescu and other researchers suggest that this difficulty can be overcome through the development of the intercultural competence. It can be realized through the achievement of several objectives, which are progressively distributed over three levels:

- 3) perception of own culture, without any reflection on it, awareness of pertaining to a certain cultural environment, as well as of the cultural differences between individuals;
- 4) differentiation of prejudices and revision of stereotypes about oneself, which involves the affective component in the process of understanding the foreign cultural environment;
- 5) understanding of the behavior specific to a foreign cultural environment, which also implies the social-pragmatic component. (Niculescu et al., 2019).

Intercultural communication skills are actions and behaviors that are intentionally repeatable and goal-oriented during interaction (Spitzberg, 2000). Such skills use appropriate and effective processes to successfully navigate an intercultural encounter in order to achieve the desired outcome. These culture-general competencies can be effectively taught and developed. Those that are most relevant to officers have been condensed into the following eight foundational skills of intercultural communication:

1. Interaction management
2. Impression management
3. Self-monitoring
4. Perceptual acuity
5. Paralanguage use and perception

6. Nonverbal communication

7. Active listening techniques

8. Communication styles

To summarize, interaction management is the effective and appropriate use of conversational turn-taking, information-gaining strategies, and topic choice “based on a reasonably accurate assessment of the needs and desires of others” (Ruben, 1976, p. 341). Interaction skills are goal-oriented behaviors enacted while communicating with an individual or group (Spitzberg, 2003) and are strongly affected by cultural preferences for direct or indirect messages as well as an orientation toward task or relational outcomes.

Impression management is defined as deliberate and motivated self-presentation and assumes that a basic motivation of individuals is to be viewed favorably by others (Goffman, 1959).

Effective impression management across cultures requires self-monitoring, which is the ability to detect appropriateness of social behaviors and self-presentation in response to situational constraints and to adjust our behaviors to fit the situation (Chen & Starosta, 1997).

Perceptual acuity is the flip side to self-monitoring. Defined as “attention to and accurate detection of various aspects of the environment” (Montagliani & Giacalone, 1998, p.601), perceptual acuity is necessary for a communicator to accurately recognize how one is perceived by others in an interaction. Accuracy will often hinge on a conversational partner’s verbal, nonverbal and paralinguistic cues.

Communication style is defined as: “The way in which we communicate, a pattern of verbal and nonverbal behaviors that comprises our preferred ways of giving and receiving information in a specific situation. If the message content is the what, and the communicators are the who, then communication style is the how” (Saphiere, Mikk, & DeVries, 2005, p. 5). Difference in communication style preferences are often conveyed via paralanguage (how a message is delivered through rate of speech, volume, word emphasis, intonation, and silence), via nonverbal communication (conveying messages through the use of touch, space, time, and body movement) and via active listening practices (culturally variable feedback preferences used to communicate understanding to a speaker).

Presently, researchers suggest service members to apply the set of guidelines designed to improve intercultural communication skills:

- being aware of your own culture;
- being other-oriented;
- being curious in dealing with different cultures;
- tolerating ambiguity;
- being behaviorally flexible;
- being emphatic;
- getting into contact with people coming from different cultures (Niculescu &

Obilișteanu, 2015).

Studying competencies, in particular foreign language communicative competence

and intercultural competence, which are related to intercultural communication and its subsets, scientists concluded the following:

- communicative competence has the crucial role for military specialists who should not only have a good command of the basic language, but also have information about specific areas of vocabulary (military translation, medical and legal vocabulary); have knowledge in the field of military terminology; have knowledge about the country (in particular, about the political system, religion, culture, history); know the nature of combined action; know the organizational and staffing structure of both their troops and enemy troops; be ready for translation in difficult combat and climatic conditions (Romanenko, 2016).

- foreign language communicative competence refers to learner's ability to use communicative strategies and mechanisms which are necessary for providing efficient interaction (Nikolaeva, 2011);

- the content of foreign language communicative competence includes the knowledge about communication under different circumstances with different communicants, and also verbal and nonverbal basics of interaction, ability of its efficient usage in the specific communication acting as an addressant and as a addressee (Batevych, 2009).

Recently the innovative modern method of forming foreign language communicative and intercultural competencies of future officers was created and proposed for implementation by Ukrainian researchers Mykhaylo Kozyar, Lidiia Nanivska and other. This method consists of several successive stages, including:

- adaptive stage, when promoting background for successful development of foreign language communicative and intercultural competencies of cadets is being created;

- reproductive stage, intended on formation of readiness to use foreign language communicative and intercultural competencies in future professional activities;

- productive and creative stage, designed for the active creative application of intercultural and communicative competencies;

- reflexive stage, which comprises development and practical application of cadets' skills of self-analysis and self-assessment of their own intercultural and communicative competencies levels, as well as for determining proper ways of further development;

- control and evaluation stage, for external evaluation of the level of cadets' foreign language communicative and intercultural competencies (Kozyar & other, 2020).

Definitely, learning and understanding a foreign language and culture is not something that happens quickly, it requires a significant investment of time and educational efforts. However, in the Armed Forces of Ukraine issues of intercultural communication training and forming foreign language competence are particularly novel. Therefore, it seems to be early to sum up and analyze the current national expertise in officers' foreign language communicative and intercultural competencies formation and development.

Conclusions. Training and developing foreign language and intercultural communication skills is the cornerstone of military communication as manifested in

international environment.

The necessity of foreign language and intercultural training is directly linked to officers' actual professional capacities, and overall success of international operations, missions, or other multilateral activities. Language proficiency provides officers the ability to go beyond simple observation and equips them with the skills to successfully interact with foreign counterparts and understand operationally relevant cultural realities. Without a strong focus on foreign language training and proper cultural training, the effectiveness of officers' operation in international environment will be limited.

Accordingly, effective operation in international environment has to be provided and facilitated by foreign language communicative and intercultural competencies of the military personnel.

Outside of the goal of achieving higher capabilities in international activities and multinational operations, development of foreign language communicative and intercultural competencies has the ability to create a more erudite and understanding officer overall which, in general, is definitely beneficial for the Armed Forces.

Suggested further research encompasses experimental verification of the implemented and newly proposed models of formation of future officers' foreign language communicative and cultural competencies at higher military education institutions and military education units of higher education institutions of the Ministry of Defence of Ukraine; finding and examining effective approaches to specialized professional training and development of servicemen readiness to operate in international environment, and other intercultural communication related studies.

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THE IDEA OF DEVELOPING THE PRINCIPLE OF STUDENT-CENTEREDNESS IN THE PEDAGOGICAL COLLEGE

Svitlana Yakymenko,

Doctor of Pedagogical Science, Professor,

Artem Borisenko,

postgraduate student,

Mykolaiv National University by V.O. Sukhomlinsky, Ukraine

Annotation. *The article focuses on the investigation of the principle of student-centeredness in the pedagogical colleges. Student-centeredness appears to be a multifaceted phenomenon, process, and complex of characteristics. The analysis of the definition and different peculiarities was substantiated. There are 4 main conditions for the implementation of the principle of student-centeredness which were considered in this article. They were divided into 4 groups as follows: environment, place, evaluation, choice. The list of features of each group was indicated. Different recommendations for the successful application of the principle were developed. Experience in applying this principle in different countries was discovered.*

Keywords: *the principle of student-centeredness, conditions for the implementation of the principle of student-centeredness, goal of student-centeredness, characteristic of student-centeredness, teacher, student.*

At the present stage of development, there is a problem which is connected with modern changes in the education system in the context of Ukraine's entry into the European educational space. The problem results in the need to create an education system that has all the necessary components to graduate professionals. These specialists would fully meet the needs of the market and even compete with the European education system.

Due to constant changes, a new culture of education is being formed. One of the key characteristics of which is the focus on student in the educational process. This process is based on the principle of student-centeredness, which is a fundamental principle of the Bologna reforms. This approach emphasizes learning outcomes, which become the main result of the educational process. Therefore, such changes in curricula should provide the possibility of high-quality, flexible, and individualized educational trajectories that meet the main goal – self-realization of the individual in education and profession.

Recently, the interest in studying student-centered issues has been paid greater attention. Student-centeredness meets the requirements and demands of modern society, which needs competent, creative, and enterprising professionals. The characteristic feature of student-centeredness, as the idea of human-centeredness, is the desire to implement an approach in which the integrity of the inner world of man ensures the relationship between the individual and society. In this regard, the functions of the teacher are changing along with the traditional function of transfer, rendering of some knowledge, the importance of the teacher as a leader and consultant student in the process of obtaining competencies, organizing effective forms and methods of working

with educational information is increasing.

In addition, you cannot ignore the change in the student contingent. A modern student is a completely different subject of educational activity than a student in the recent past [1].

Student-centeredness renews the subject in education and directs to the formation of the student's individuality, the formation of his holistic personality. The ideas of student-centeredness become the basis for designing an educational environment that provides conditions for self-development, self-organization, and self-realization of the individual in professional activities, creativity and other activities with their conscious choice.

Student-centeredness is a complex, multifaceted phenomenon and process. The complex characterization of this phenomenon must take into account at least four circumstances. Firstly, it is the active reaction of the educational environment to the changing needs of the labor market; secondly, it is a model of educational development, in which the student from the object becomes a subject of educational activity, an active participant in the scientific and educational process; thirdly, it is the concentration of efforts to take into account individual qualities, abilities, on the formation of individual educational trajectories and, accordingly, individual profile competencies; fourth, it is a new level of responsibility to create conditions for high learning outcomes and state-of-the-art competencies to emerge.

The modern society produces more and more new requirements, raises the level of quality of educational services. Today, there are competencies in demand but yesterday they were secondary. They include the ability to work in a team, the ability to learn throughout life, willingness to change, the ability to act in unusual situations, etc. It is impossible to achieve these and other useful and required competencies without changes of innovative character of all the components in scientific and pedagogical activity.

According to student-centeredness, there is a student who influences the content, methods, materials, and pace of learning. The main characteristics of such training are the following:

- dependence on active rather than passive learning;
- perfect study and understanding of the essence of disciplines;
- increasing student responsibility and accountability;
- independence and interdependence of the student; interdependence and mutual respect between teacher and student;
- a reflective approach to teaching and learning on the part of both the teacher and the student.

Knowledge can be transferred to the student by the teacher, competencies are acquired during educational interaction based on student-centered learning, which stimulates motivation and cognitive activity of students. Student-centeredness considers the student as an active subject of educational activity and takes into account their features and needs. Flexible learning trajectories are offered, various innovative methods are introduced. A sense of autonomy is provided with appropriate support and support from the teacher as a mentor and guide of the student in the maze of knowledge. It is necessary

to emphasize the updated content of the role of the teacher, who implements the new function of head and consultant of students to help them master certain competencies, systematization, and improvement of knowledge. It is designed to provide a higher level of counseling and motivation of students in the selection of information, its sources, the organization of adequate learning situations, the elimination of identified gaps. The purpose of the teacher is to form a partnership with the student, which will achieve clarity and transparency of requirements not only to the level of academic achievement but also to the control procedures. An important task is also to motivate the student to do the necessary level of activity and independence in presenting their own conclusions, willingness to self-study, self-improvement to achieve the planned result. A student, from a passive and controlled participant of the educational process, who is not always ready to make an effort and show cognitive activity, is gradually becoming an active and interested subject, the leader of his learning process, which requires even greater involvement, perseverance, dedication, skills to work with diverse information, use various forms of access to it, etc. Students interact with each other and with the teacher in choosing goals and means to achieve them, explore the best ways to acquire the necessary competencies.

It is important to realize that student-centeredness is a multifaceted phenomenon, process, and the complex characteristics of which are determined by the following four circumstances:

1. Student-centeredness is an active reaction of the educational environment to the changing needs of the labor market, the need to form general and professional competencies necessary not only for quality performance of professional duties but also for solving life problems, situations, urgent problems of statehood.

2. Student-centeredness is a model of educational development in which the applicant of higher education is transformed from an object into a subject of educational activity, an active participant in the scientific and educational process. At the same time, the applicant of higher education becomes a responsible social partner, initiative, active participant in the activities of the academic community [2].

3. Student-centeredness involves the introduction of personality-oriented learning technology to ensure the comprehensive development of the learner's personality, taking into account individual characteristics, abilities, interests, needs, capabilities, individual profile of competencies, concentration of efforts on the formation of his worldview, professional skills, self-development, self-regulation.

4. Student-centeredness is a new level of responsibility of a higher education institution, where an activating educational environment should be created, which will support the future specialist with high learning outcomes and the latest competencies. A saturated and diverse educational environment is such kind of an environment whose properties and the style of interaction embodies the values of teachers and graduates, their ideas about the norms and ideals of educational activities, creates conditions for free choice and development of each student according to their abilities, interests, opportunities. Creative activity of participants of educational process, a sufficient level

of their emotional and intellectual pressure, psychological comfort is as well supported.

Therefore, the essence of student-centeredness is to create a model of educational development in which the applicant of higher education becomes a subject of educational activity, i.e., an active participant in the scientific-educational and cultural-artistic process.

The main goal of student-centeredness is to create favorable conditions for the quality acquisition of knowledge, the formation of professional skills and abilities, competencies while maintaining the freedoms of higher education seekers to achieve cultural and educational goals.

Current trends of educational programs modernization require the use of active methods of teaching students, which means reducing audit classes, especially lectures, and increasing the amount of independent work of students. The emphasis is shifted towards active didactic management and control of learning, assessment of the quality of students' independent work, which is fully consistent with the “student direction” or the principle of student-centered [3]. Student-centeredness is a basic principle of Bologna reforms in higher education, which involves shifting the emphasis in the educational process from the teacher to learning as an active educational activity. Given this approach, the emphasis is on learning outcomes, which becomes the main result of the educational process for students in terms of knowledge and understanding.

The principle of student-centeredness is based on the competence-based approach, in other words the competence approach. The ability to learn develops together with the interest and direct participation in solving realistic problems [2].

Student-centered learning gives more flexibility to work in small groups or study remotely. Given today's realities, this method is particularly relevant and appropriate. Today, there is a need for educators to find ways to virtually apply student-centered learning. Distance classes can be designed to effectively include student-centered learning.

Teachers play an important role in the educational process. Dedicated teachers do their best to promote positive results for their students. Student-centered learning does not reject or diminish the role of teachers. Instead, teachers' experiences are used in various ways to increase students' interest.

Teachers should direct students to a meaningful interaction with materials, which are selected by students in the class by:

- helping students adapt to new and different learning environments;
- helping students imagine what successful learning looks like;
- allowing students to express their ideas in their own terms;
- helping set goals for student-centered classes;
- helping students learn to set and achieve their personal educational goals;
- giving students enough space for failure and learn from their mistakes;
- helping students develop skills of critical thinking and self-reflection;
- providing students with an opportunity to be leaders in the learning process
- showing students specific methods to access information that interests them.

It is important to keep in mind that student-centeredness is a rather complex, multifaceted phenomenon and process. “Student-centeredness is an active response of the educational environment to the changing needs of the labor market, the need to form general and professional competencies necessary not only for quality performance of professional duties but also for solving life problems, situations, urgent problems of statehood.” The main goal of student-centeredness is to create favorable conditions for the quality acquisition of knowledge, the formation of professional skills and abilities and competencies while preserving the freedoms of higher education seekers to achieve cultural and educational goals [3].

Not taking into account external factors, such as differences in teachers’ salaries, learning conditions in Ukraine and the United States, it is advisable to focus only on similar and different learning bases [2, p. 16].

Another aspect that should be taken into account is that students as a target audience should get more opportunities and participate in assessing the quality of teachers’ work, namely based on anonymous questionnaires after the discipline (course). It is quite dangerous because a student can take revenge on a demanding teacher, so in American universities, anonymous questionnaires are combined with attending classes by specially appointed persons, whose main functions are to ensure the objectivity of assessment of the level of teaching.

Moreover, students have a significant impact on the achievements of teachers, so various incentives and conditions for retaining positions of teaching staff, primarily covering academic activity (publications of the appropriate level), international experience and cooperation with business representatives.

The next is that students themselves should be involved in the formation of programs of disciplines, as well as employers who will have an impact on the material assimilated by future employees [4, p. 43].

The spread of student-centeredness in European countries also has its peculiarities. According to J.T. Klein [5, p. 87] Student-centeredness has a significant impact on how we perceive the learning process. Student-centeredness has ancient origins, because it existed in the time of Socrates and changed throughout history).

The emphasis is on the active rather than on the passive learning, on an in-depth study of the subject and its understanding, increasing the level of student responsibility, setting for student independence, interdependence between teacher and student, mutual respect between teacher and student, reflective approach to the learning process on the part of both the teacher and the learner.

The documents adopted at the Yerevan Conference (2015) identified a clear link between student-centeredness and the provision and improvement of the quality of education. This relationship is particularly noticeable in the revised ESR5. Interdisciplinary programs can be used for student-centeredness to:

- support effective and active learning;
- simplify different ways of learning;
- develop autonomy and independence of the student;

- focus on skills and practical activities that provide lifelong learning and independence in solving problems;
- build a curriculum using the methods of constructivist pedagogy;
- use intermediate control in order to ensure the dynamics of the learning process.

The High Level Group on the Modernization of Higher Education in the European Commission's Report on Improving the Quality of Teaching and Learning in European Higher Education Institutions has developed plans to improve the quality of teaching and learning and believes that student-centeredness should be at the heart of curriculum development: "Higher education institutions should introduce and develop cross, trans- and interdisciplinary approaches to teaching, learning and assessment, helping students develop understanding and entrepreneurial, progressive types of thinking" [3].

Interdisciplinary programs become an incentive to improve curricula and develop new teaching methods, reflect the skills and professional qualities in demand among European employers, such as problem-solving skills, teamwork skills.

Professor Orla Philly, the Chair of the Scientific Council of Ireland, supports the development of interdisciplinary programs at all levels of education: "... we need to support the idea that interdisciplinarity can improve learning outcomes. Elements of interdisciplinary education are being introduced at all levels of education in order to spur students to change different subjects and to gain knowledge in other areas. This will serve their interests and prepare them for a variety of life challenges" [4].

Regarding the spread of student-centeredness in Ukraine, it should be noted that in recent years the situation has improved significantly among colleges in Ukraine, however, it has not yet reached the desired level.

The principle of student-centeredness is subjective and useful only because it ultimately supports the development of learning experiences for students.

With this in mind, four (out of countless) principles of student-centeredness can be identified that should be considered in curriculum development and learning. Student-centeredness is a learning process that puts students' needs ahead of the convenience of planning, policies, and procedures [7]. Thus, there are 4 main conditions for the implementation of the principle of student-centeredness, namely:

- Environment:
 - 1) creative;
 - 2) dynamic;
 - 3) mobile;
 - 4) emotionally safe;
 - 5) cognitively agitating;
- Place:
 - 1) respect for history;
 - 2) arouses enthusiasm and curiosity;
 - 3) students believe they have an impact;
- Evaluation:
 - 1) in the forms of assessment in accordance with the curriculum;

- 2) grades improve together with the increasing level of understanding of students;
 - 3) displays who they really are;
- Choice:
- 1) content and priority;
 - 2) direction of their work in the audience;
 - 3) learning strategies, etc.
 - 4) pace and sequence.

Thus, the principle of student-centeredness is a system of education that puts the student in the center of the educational process. Learning itself promotes active student participation, and seeks to instill in students the joy of studying in college and beyond. In addition, the main conditions for the implementation of the principle of student-centeredness are the environment, place, evaluation, and choice.

One of the best examples of such a training can be the project method. Its use minimizes routine work and leaves more room for constructive creative search. The structure of such a project can be distinguished as follows:

- the purpose of the project and its relevance;
- sources of information (literature, media, databases, including electronic, interviews, questionnaires, including foreign partners, “brainstorming”) and information processing;
- results;
- presentation of results.

Thanks to this approach it is possible to train future specialists to solve current issues, tasks of the future profession.

Such teaching methods, of course, have many advantages that make them indispensable for quality training in any field. Such methods allow to organize the educational process more effectively, help to develop students’ skills of critical thinking and tolerance to another point of view, as well as the ability to work individually or in a team to achieve goals.

Thus, the importance of using the principle of student-centeredness in the modern field of education, namely in colleges, was considered and proved. Features, methods, and means by which student-centeredness can be implemented were considered.

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PHILOSOPHY AND THEOLOGY

PHILOSOPHICAL AND PEDAGOGICAL UNDERSTANDING OF MYTHOLOGICAL APPROACHES OF THEOMACHIA IN VIDEO GAMES AS LITER

Alla Zaluzhna,

Doctor of Philosophy, Professor;

Nataliia Zoshchuk,

Ph. D. of Philological Sciences, Associate Professor;

Tetiana Koberska,

Ph. D. of Philological Sciences, Associate Professor;

Maxim Melnichuk,

Ph. D. of Philological Sciences, Associate Professor;

National University of Water and Environmental Engineering, Rivne, Ukraine,

Olha Kovtun,

Ph. D. of Pedagogical Sciences,

Municipal Institution of Higher Education

Rivne Medical Academy of Rivne City Council, Ukraine

Annotation. *This article reproduce basic plots of different philosophical ideas and mythologies in games, they also continue their plot in different versions. Thus, video games create new myths that have been in demand since religion lost its popularity in the modern era. The need for religion was in ancient times and now, but due to the development of science and knowledge of facts, many people have ceased to be religious and the world heritage of myths began to be perceived as primary encyclopedias and collections of stories and fairy tales. However, the human unconscious as an irrational part of human personality needed these myths. Before that, they told about the transition between different stages of human development and religiosity. People moved from gathering and hunting to agriculture, there was a myth that a more civilized deity overcame some primary chthonic deity. In Greek mythology, it was Gigantomachia, the Olympians' struggle against the sons of Gaia. Thus, the transition from religion to science was not accompanied by any myth, because it would be absurd, because people have lost mythological thinking. However, the unconscious in humans continued to think more primitively, and it needed an explanation of where the gods had gone. In art, and especially in video games, where the player is often the main character, there is a tendency to theomachy or theocide, the story of how a man kills the gods and becomes godlike. This plot explains where the gods went. As Nietzsche says, "God is dead! God will not rise! And we killed him! " Mankind is directly responsible for the development of science, and therefore it is responsible for the death of the gods, which is repeatedly reproduced in the plots of books, movies, and video games. Thus, even simple stories about the hero are stories about the awakening of consciousness, but only now they have become more specific and have taken the form of theomachy. Along with this global need to explain the death of the gods, video games have also been affected by the needs of nations. These needs arose in response to problems in history preserved in the form of national memory.*

Keywords: *philosophy, mythology, games, theomachia, player.*

This study explores the potential for video games to be examined in the same or similar fashion as traditional literary texts. Moreover, narrative video games are literary texts worthy of exploration, interpretation, and literary criticism. Responding to the ongoing debate between ludology and narratology that surrounds the question of video games as texts, The theory of player-generated narratives recognizes the design of narratives in games, their functionality, and how they begin to be interpreted. This project argues, through research and empirical data gathered through classroom experimentation, that video games are viable texts in literature classrooms. The narratives video games employ intersect with those of traditional texts and students are able to explore them in a similar fashion. Individual agency on behalf of the player/reader creates player-generated narratives from which the player/reader may formulate interpretations of the text. Moreover, video games explored as literary texts have the power to increase in-class participation and engage otherwise disengaged students. When teaching narratives, educators may be overlooking a powerful medium in video games. Students are, to varying degrees, engaging with video game narratives as a form of literature.

The idea of theomachy as a necessary stage of myth-making will be considered for the first time, previously this term simply characterized wars between gods or against gods. There is a need for sources that considered similar issues. These sources were selected works by Sigmund Freud, Karl Gustav Jung and Joseph Campbell. The above scientists studied the problems of philosophy, mythology and drew an analogy of its plots to the mental processes that take place in the life of every person.

In particular, Freud discovered the Oedipus complex and named it after the hero of Greek mythology, whose situation was an exaggerated example of the son's love for his mother. Also, Freud called the disorder, characterized by narcissism and indifference to others Narcissism, in honor of the character of Greek mythology. Jung studied the mythologies and folklore of different peoples of the world and noticed patterns in the plots and characters of the texts. He called these patterns archetypes and explained them as prototypes that never appear in pure form, but only in variations with different similarities, including symbolism. These archetypes, as Jung argued, reflect the inner needs of the human psyche, hidden desires, destructive thoughts, and morality.

It is interesting that with the help of archetypes it is possible to build a storyline, such as fairy tales, which would reflect the history of personality development. The process of maturation or awareness of the complex nature of the human psyche, the scientist called Individuation and identified its main stages. Campbell, a scientist who formed the idea of the monomyth, the only pattern of man's journey to the hero, interpreted myths in a similar way.

The work of the above scientists will help in the study of the idea of theomachy. First, since it was pointed out that theomachy is a necessary stage of myth-making, Freud's work "Totem and Taboo" will be needed as an example of describing the formation of different stages of development of mythology and religion. According to Freud,

the original case of the patricide was the first stage in the development of civilization. Also, the scientist describes the development of religions, the emergence of fetishism, totemism, and magic. This paper suggests that theomachy repeats the original plot of the patricide, increasing the scale of the theocide. There is a common association of the figure of the father with the figure of God. In addition, it has been said that theomachy, although the result of myth-making, does not take place in the form of a myth, but is an element of fiction, film, or video games. That is, theomachy is perceived as fiction, but it is the result of the creativity of the human unconscious. In addition to the personal unconscious, video games, as well as other arts, were influenced by the collective unconscious, so in this work, it is also important to apply the theories of K.G. Boy. In addition, the monograph of J. Campbell is relevant for the development of video game characters, as well as for the interpretation of the plot of the video game as the personal growth of the character.

Theomachy is the latest episode of mythology, it is important to indicate all other stages of development of mythology because it will allow reflection on the progress in video games. Fraser identified three stages in the development of religion, where the first is the belief in magic, the second is religion, and the third is science (Fraser, 2016). This Theory has been criticized for not taking into account the complexity of culture and simplifying the processes of historical development, so it is more appropriate to consider the stages of religion according to Edward Taylor, who defined animism as the first stage of religiosity, followed by polytheism, replaced by monotheism (Taylor, 1989). R. Marett deepened the above division of religions into stages and identified the very first primitive stage of religiosity, which he called pre-animism (Marett, 2016). At this stage, primitive man does not have certain religious doctrines or beliefs but is guided mainly by his unconscious emotions. Such a person already perceives the world as something endowed with pervasive power (Marett, 2016). At this stage, a person has only two concepts related to religiosity: mana and taboo (Marett, 2016). Both of these concepts are antonymous because mana is potential energy, the interaction with which leads to the desired results for man, and taboo - on the contrary, is the potential for negative consequences (Marett, 2016). Thus, the main stages in the development of religion are pre-animism, animism (which includes parallel currents such as totemism, fetishism, and magic), polytheism, and monotheism.

Usually, the transition from one stage of religion to another is reflected in the myths, which in this case are historical sources in free art form. As Marett pointed out, it is not ideas that are primary in religion, but actions; not a belief, but a cult, a ritual because it is the ritual that gives rise to the myth, not the myth that gives rise to the ritual (Marett, 2016). This can be confirmed by the description of how totemic religions are formed in Sigmund Freud's Totem and Taboo. Freud describes primitive human groups based on the work of Darwin. In such groups, a strong male dominates, playing the role of leader and is the father of most members of the group (Freud, 2012). As an authoritarian leader, this male did not share the rights of females with other males in the group. Therefore, when his sons grew up, they had to leave the herd in order to start a family and be the

leader of a new group. Thus, groups became families, and the leader's right to females became a ban on incest. Freud claims that once the sons reunited and killed their father, and in order to take away his strength and take his place, they ate his body. After this crime, the sons began to realize that they had committed immoral acts and began to feel guilty. Because of this feeling of guilt, the sons experienced the effect of “late obedience (late obedience) ” and began to defend the rules established by the father, so there are taboos about murder and incest (Freud, 2012).

In order not to forget the above event, it is regularly reproduced in the form of a ritual (Freud, 2012). In this ritual, the father is replaced by the animal with which he is associated. The association of a father with an animal can occur even before his murder due to the ambivalent feelings of his sons towards him (Freud, 2012). Such sensations presuppose the existence of love in parallel with hatred, and in order to prevent cognitive dissonance, one of the two senses is displaced or transferred to other objects (Freud, 2012). Freud's research has repeatedly mentioned cases where a son's hatred of his father was transferred to an animal and took the form of a phobia (Freud, 2012). According to the scientist, these are the remnants of totemic thinking in the human psyche (Freud, 2012). Thus, the taboos of patricide and cannibalism were abolished on holidays. It is important to clarify that this did not happen directly but in the form of a ritual, and instead of a man they killed and ate a totem animal, the killing and eating of which was usually taboo.

Later, the figure of the father, as well as the totem that symbolizes it, became a deity (Freud, 2012). Freud argues that in this case, God is the exalted father, and love for the father begins to be projected on God (Freud, 2012). The explanation for this may be the fact of forgetting a real person when future generations learn about this person from the legends of previous generations. However, Freud argues that this occurs when feelings of guilt and love begin to prevail over hatred. In most religions, totem roots can be traced, because often an animal is dedicated to the gods, and sometimes several; animals sacrificed to them were sacrificed to the gods; in myths, the god is often transformed into a totem animal, as, for example, Zeus was transformed into a bull (Hesiod, 2005). That is, the image of the father is first replaced by a totem animal, which then develops the image of the deity. One of the consequences of the above is the self-determination of the people as children of a certain god. For example, the Slavs were named Dazhbog's grandchildren in *The Story of Igor's Regiment*.

Thus, the transition from one stage of religion to another is accompanied by ritual and myth, as seen in the example described by Freud in “Totem and Taboo”. However, in the age of modernism, when scientific or atheistic views began to dominate, no new myths emerged to accompany this transition. The only plot created at that time to describe the above events was Nietzsche's phrase “God is dead” (Nietzsche, (2011)). This phrase did not mean that Nietzsche thought that God ever existed and then died for some reason – it was a metaphor that meant the decline of faith in God, but at the same time lost the idea of creating the world, dictated by morality and God's plan as a plan according to which the history and destinies of people unfold. Thus arose a situation when human

consciousness, which should have been scientific and rationalistic, did not need any myths, but the unconscious, or rather, the collective unconscious, needed these myths. So there was a need for a story about killing God, and that story had to be reflected in art. In fact, it is found in both movies and literature but is easiest to spot in video games that touch on mythology, where the player's character gradually becomes stronger throughout the game, in order to fight the main boss, such as the Greek god Zeus.

Since the collective unconscious was mentioned above, it is necessary to generalize this term, as well as to define its relationship to the human psyche and culture. First of all, one of the most influential researchers of the conscious and unconscious in the human psyche was Freud. Freud was not the one who discovered the concept of the unconscious, but he proposed a scheme for the structure of various components of the psyche. His model of the psyche consisted of Ego, Super-Ego, and It (Freud, 2019). The ego is human consciousness and what a person knows about himself (Freud, 2019). The super-Ego and It are two forces that influence the Ego, and it tries to find a balance between them (Freud, 2019). It is an unconscious part of the psyche, primitive, where desires and instincts come from (Freud, 2019). There are also thoughts that are morally unacceptable or too disturbing. The Super-Ego is a semi-conscious component that dictates morality and creates pangs of conscience.

Carl Gustav Jung extended this model by dividing the unconscious part of it into individual and collective (Jung, 2018). Unlike the simple unconscious, the collective unconscious is supra-individual and it is the same for all people (Jung, 2018). The collective unconscious is the experience of all previous generations (Jung, 2018).

In the game Titan Quest, the protagonist throughout the plot fights against the Telhin brothers, who are called titans in the game. The fact is that the gods in this game also left people, and the Titans decided to take advantage of the situation and try to seize power over the world. When, at the end of the game, the hero defeats all the Telchins and reaches Olympus, he communicates with the gods, who say that humanity is already developed enough to cope without the help of the gods, so they decided to just leave this world peacefully.

The plot of the game Titan Quest is easy to interpret with the help of symbols described in “Archetypes and the Collective Unconscious” by KG Jung. “If the threat to one's own identity comes from dragons or serpents, it indicates the danger that the instinctive soul, the unconscious, threatens to re-absorb all that has been acquired by consciousness”. Because the Titans were chthonic or natural deities, they can be attributed to the image of dragons or snakes mentioned by Jung. “The main feat of the hero is to overcome the monsters of darkness: this is the desired and expected victory of consciousness over the unconscious. Day and light are synonymous with consciousness, night and darkness - unconscious. Awareness is probably the strongest ancient experience because it created a world whose existence no one knew before. “And God said, Let there be light” – is a projection of the prehistoric experience of consciousness, separated from the unconscious. In today's primitive man, mental well-being is still under threat, and “loss of soul” is a typical mental affectation that encourages primitive medicine to a

variety of psychotherapeutic interventions” (Jung, 2018, p. 33).

Thus, the plot of the video game reflects the inner struggle of man, who no longer relies on the help of anthropomorphic gods in maintaining their consciousness. However, this man faces a problem, the role of which is played in the plot of the game by the Titans, whose seizure of power over the world can be interpreted as fear of losing consciousness, or morality and return to the unconscious, almost animal existence. The protagonist of the game overcomes these obstacles by defeating his enemies and one last time talks to the gods who are about to go to another world, which is an analogy of death. The gods hoped that humanity would be able to function successfully, and the protagonist, who is a representative of humanity, just proved it. Therefore, the story of Titan Quest is a story of human victory and growth.

Of course, all the information and individual experience of each ancestor cannot be contained in the collective unconscious, so it contains the experience that is most often repeated during human lives (Jung, 2018). Thus, the mind of the newborn child is not a tabula rasa, because the collective unconscious is already "written" in it as a universal cultural memory (Jung, 2018). Jung also discovered the concept of archetypes, which are elements of the collective unconscious (Jung, 2018). Archetypes are situations, images, and characters that people interact with throughout their lives (Jung, 2018). Archetypes are categories without prototypes, ie some characters may belong to a certain archetype due to the conformity of features, and the archetype itself cannot be separated from these characters, only to outline its general features by comparing examples in which this archetype occurs (Jung, 2018). For example, one of the most popular archetypes is the trickster, a character who has intelligence but no sense of responsibility, uses cunning to deceive other characters. Its main goal is to sow chaos so that people understand that the laws or morals they are guided by are shaky and bad. Thus it is a force that “does only good, desiring only evil. The trickster combines the characteristics of an animal, a human being, and a god. Sometimes the image of a trickster merges with the image of a cultural hero - one who teaches people crafts or arts” (Jung, 2018). Examples of the trickster are the Scandinavian god Loki, the Greek hero Odysseus, the Celtic spirit Pak, the Chinese monkey king Sun Wu-kun, the Slavic forester, the god Veles, the fairy tale character Fox, Mephistopheles Goethe, the French Cat in Boots and others.

Examples of a trickster who is also a cultural hero are One who turned into a crow and stole honey from poetry. Fleeing in the form of an eagle, he carried honey in his beak and ate some of it. What he had already digested came out of the anus. The result was that the real poets were endowed by the gods themselves with this gift, and those to whom the One Eagle emptied became incompetent. Similarly, Prometheus is a trickster and a cultural hero, because he stole fire from the gods and taught people to use it, as well as deceived Zeus about sacrifices: he offered to choose between two piles of animal carcasses (Hesiod, 2005). One pile was a mountain of bones and tendons covered with fat, and the other pile was edible parts covered with skin. Zeus chose what was covered in fat, and since then people have eaten meat and sacrificed bones.

In addition to the presence of the same characters, situations, and images in different

mythologies, the proof of the reality of archetypes is also the similarity of the plots of different mythologies (Jung, 2018). For example, one of the early plots of almost every mythology is the struggle of gods or gods against the older generation (Jung, 2018), (Hesiod, 2005).

In Greek mythology, there was Titanomachy, when Zeus and his brothers fought against his father and other titans. In Irish mythology, different generations of the peoples who inhabited Ireland fought against the Fomors, a demonic race. In Norse myths, the gods fought against the Jotun giants. Later, such myths progressed, and not only the gods, but also people clashed and fought with the giants. In Greek mythology, Odysseus was captured by the Cyclops. In Norse mythology, trolls often appeared instead of jotuns. That is, the correspondence and similarity between the myths are maintained depending on the progress of civilizations.

In addition to the collective unconscious, national memory is an important concept in this study. The similarity of this concept with the collective unconscious is in the supra-individual, but national memory is a conscious phenomenon (Paces, 2009). National communities have always relied on commemorative ceremonies and monuments, myths and rituals, and glorifying individuals, objects, and events in their own history to create a common narrative (Paces, 2009). National memory, as a rule, consists of the nation's generally accepted past (Paces, 2009). Interpretations of history can change and sometimes compete (Paces, 2009). They can be challenged and disseminated by various stakeholders who are fighting for their stories to be recognized, documented, and made into national history (Jung, 2018). Often, national memory is adapted to introduce a politicized vision of the past so that the political position looks in line with national identity (Paces, 2009). In addition, it significantly affects how historical facts are perceived and recorded and can deny or confirm facts.

Conclusions. Video games reproduce the basic plots of different mythologies, they also continue their plot in different versions. Thus, video games create new myths that have been in demand since religion lost its popularity in the modern era. The need for religion was in ancient times and now, but due to the development of science and knowledge of facts, many people have ceased to be religious and the world heritage of myths began to be perceived as primary encyclopedias and collections of stories and fairy tales. However, the human unconscious as an irrational part of human personality needed these myths. Before that, they told about the transition between different stages of human development and religiosity. For example, when a nation moved from gathering and hunting to agriculture, there was a myth that a more civilized deity overcame a primary chthonic deity. In Greek mythology, it was Gigantomachia, the Olympians' struggle against the sons of Gaia.

The collective unconscious, which is the same for all people, presents them with a need that takes the form of archetypes. More precisely, these archetypes help humanity to cope with common problems. For example, if a person had a negative experience of communicating with his mother as a child, then the female characters in the imagination and dreams of this person will be hostile, such as a witch or mermaid. If the experience

was positive, then the female characters will help this man, for example, as fairies from Celtic mythology. Thus, mythology as a product of the human psyche is also found in literature, movies, and video games and people can enrich their life experiences by getting acquainted with these products. Video games are a unique product of art because their main focus is on the experience of the character. Moreover, some games have a non-linear plot, which can be compared to a book that would end differently for each reader, although the main plot elements are the same. The player's actions, his decisions affect the development of events, and therefore in video games, there is a sense of responsibility for what is happening.

Thus, the plot of the video game reflects the inner struggle of man, who no longer relies on the help of anthropomorphic gods in maintaining their consciousness. However, this man faces a problem, the role of which is played in the plot of the game by the Titans, whose seizure of power over the world can be interpreted as fear of losing consciousness, or morality and return to the unconscious, almost animal existence. The protagonist of the game overcomes these obstacles by defeating his enemies and one last time talks to the gods who are about to go to another world, which is an analogy of death. The gods hoped that humanity would be able to function successfully, and the protagonist, who is the representative of mankind, just proved it.

Therefore, to some extent, video games as a genre of art are a simulation of life in which the player can meet their needs, which, for example, maybe unacceptable in real life. Most video games allow the killing of other characters, which can be used as a sublimation of the destructive desires of the player. However, the plots of video games, as well as the plots of other genres of art, are based on the original archetypal plots, and therefore, to some extent, educate people and help them grow as individuals.

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ARTISTIC PSYCHOANALYSIS AS A NEW CATEGORY IN LITERARY STUDIES AND PSYCHOLOGY

Yuri Kuznetsov,

Doctor of Philology,

Academician of the National Academy of Pedagogical Sciences of Ukraine,

Institute of Literature named by T.G. Shevchenko of the

National Academy of Sciences of Ukraine

Annotation. *The article analyzes the process of psychoanalysis in Ukrainian literature, which Ivan Franko drew attention to in his time. The term "artistic psychoanalysis" helps distinguish the creative process of a word artist from the activity of a literary critic, for whom psychoanalysis acts as a research method. For the writer, psychoanalysis is an artistic phenomenon in the work.*

For the first time in Ukrainian science, the concept of "artistic psychoanalysis" was introduced. A brief definition of this concept is provided as a depiction of the mental structure of the hero's personality, showing the functioning of the subconscious mind, which affects the motivation of behavior. This became important not only thanks to the discoveries of Sigmund Freud, but also because the 20th century became an insight into the deep psychology of man, in particular, in world fiction.

Keywords: *artistic work, phenomenon, artistic psychoanalysis, artistic psychologism, subconsciousness, structure of the mental world.*

Artistic psychologism, which was a central category for depicting the heroes of 19th-century works of art, loses its significance for 20th-century writers. Artistic psychologism was aimed at the external manifestations of the heroes, their movements, actions, behavior, so to speak, external speech, sometimes internal monologue. In the new century, tectonic changes are taking place in artistic thinking. Masters of words, brushes and even musical instruments think differently - they look into the inner world of the hero, this boundless cosmos of the human soul and try to find at least some coordinates to understand it. This new look into the inner universe gives rise to a completely different literature, other styles, directions, genres, in short, other artistic forms, for the knowledge of which completely different tools were needed. Psychoanalysis is one of the newest methods of literature research. But here it is important to distinguish between psychoanalysis as a method of studying artistic phenomena and psychoanalysis as the artistic phenomenon itself, which the artist gives us. By analogy with artistic psychologism, we launched the category of artistic psychoanalysis into scientific circulation. It means the master of the word shows the mental, spiritual, and spiritual complexities of the inner world of the hero and the mechanisms that control these processes. For example, we will show how Mykhailo Kotsyubynsky depicts the difficult world of his lyrical hero in the sketch "Apple Blossom" (1902).

To my deep conviction, Mykhailo Kotsyubynsky believed that the reader did not understand the full depth of his short story "Apple Blossom" (1902). What gives reason to think so? 6 years later, when Mykhailo Kotsyubynsky wrote his gem "Intermezzo"

(1908), he included "actors" in the subtitle. An author who never wrote dramatic works. And Kotsyubynskyi did not mention active persons either before or after "Intermezzo".

Who are these effective persons? - "My fatigue. Fields in June. Sun. Three white sheepdogs. Cuckoo. Larks the iron hand of the city. Human grief" (2, 297). And what kind of actors are these who do not deliver monologues or conduct dialogues? Finally, they are not allegorical characters, as in a fable. Both in "The Apple Blossom" and "Intermezzo" the whole action takes place (in the first) not in the writer's house, not in the apple orchard (in the second), not in the estate, nor in the Kononivsky fields, but in the head of the lyrical hero. To be more precise, in his soul.

Thoughts, images, feelings, ideas, fantasies - everything that is interwoven in the head of the lyrical hero, Mykhailo Kotsyubynskyi emphasizes with the words: "...My head, like a spider's web, is scurrying with a lace of thoughts (2, 170). Or further: "My head is racing with thoughts. What am I thinking about?" (2, 171). The story is told in the first person: I hear him; I see everything that way; I hear the cracking of the yoke; I think; I understand; I know; I can't take it anymore; I cry and so on.

"Apple Blossom" is Mykhailo Kotsyubynsky's first work, written in the manner of stream of consciousness. It can be said that it is a reference work of this style. Unfortunately, critics did not pay attention to this either then or now. Although this fact means a lot for the history of literature and not only Ukrainian. The entire "plot" takes place in the head of the lyrical hero. The main character "I" is consciousness. External impulses, internal impulses, experiences - everything is intertwined in the mind of the lyrical hero. Therefore, the work is difficult to analyze and difficult to understand. The Freudian theory of the "topic" of the mental world or its structure can provide the key to solving all processes. Although, as already mentioned, Mykhailo Kotsyubynskyi was not familiar with the works of Sigmund Freud, despite the fact that he was interested in psychological literature. Freud's works were translated and published in Russia at a time when Mykhailo Kotsyubynsky was already concerned about his health. However, the artistic psychoanalysis of Mykhailo Kotsyubynskyi took place in parallel with the researches of Sigmund Freud, and sometimes preceded them. Therefore, having no idea about the works of Freud regarding the "topic" of the mental world, Mykhailo Kotsyubynskyi with artistic brightness, psychological precision, with textual and subtextual movement of meanings depicts consciousness, subconsciousness and self-consciousness, complex impulses, its continuous internal "work" that covers all spheres of life an individual. This is an example of artistic psychoanalysis.

Before delving into psychic matters, some remarks should be made about the genre of the work. New observations ("internal movements of the soul" - Nina Lukivna Kalenichenko) required new forms. The author defines the genre of the work as "etude", hinting that there is no structured story here, and perhaps certain plot components. Indeed, the genre of "Apple Blossom" is significantly different from the story "Doll". Here there is no description of the place of events characteristic of a story (in "Doll" it is a gloomy village, which meets the heroine in the exposition of the story). There is no tie-in, meeting of actors (in "Lyalechka" - Raisa Levytska and Father Vasyly). Neither

the development of events (relationships between the characters), nor the climax in the usual sense.

"Apple Blossom" begins with a tragic chord: "I closed the door of my office tightly. I can't... I definitely can't hear that muffled, wheezing breath that seems to fill the whole house. There, in the women's bedroom, my child is dying" (2.169). Such an introduction is more like not a story, but the first deep, tragic chords of Ludwig van Beethoven's Fifth Symphony, which the writer Hoffman called "one of the most outstanding works of the age." Beethoven himself spoke about the main motive of the beginning of the symphony and its entire first part: "So fate knocks at the door" (What does it bring: life or death? The entire development of the etude (the course of the hero's thoughts) is dominated by this tragic question, which is symbolized by one sound - "whistle".

But this is only one plane of consciousness of the lyrical hero. The novel-etude "Apple Blossom" can be called a milestone in the work of Mykhailo Kotsiubynskyi, if we take into account his artistic penetration into the inner world of man. As we already wrote in another study, "Freud developed the concept of mental organization, distinguishing three structural elements (instances) of the personality: "It" or Id - in German "Das es"; "I" or "Ego" - in German "Ego" and "over-Ego" or "super-Ego" - in German "Das Uberich"). It is an unknown force that affects human behavior and actions, as well as two other structural elements. "I" is the human mind that controls the psyche and the interaction between instincts and behavior. "Super-I" or super-Ego - the highest instance - is both self-observation, and ideals, and conscience, and censor, and judge." It is in "The Apple Blossom" that all these three structural components are presented for the first time in the country's literature, regardless of Freud. Artistic knowledge develops in parallel with scientific knowledge.

Stream of consciousness. You can draw a cognitive map that shows how various phenomena of the external and internal life of the lyrical hero are verbalized in the mind. Indeed, without verbalization, naming, naming, the phenomenon is not realized, and, therefore, does not exist for the lyrical hero and the person in general.

Consciousness does not know stop, pause, break (a dream is a separate conversation). It records various human states. And Mykhailo Kotsyubynskyi shows how rich, complex and not always understood this consciousness is.

1. The explosion of the hero's feelings spills into a stream of words of internal speech. An explosion caused by a suffocated, hissing daughter's breath.

2. The light and shadow from the lamp is experienced by the lyrical hero as a struggle between life and death. A little further (No. 9), when the daughter's condition worsens, "the lamp begins to smolder and go out." The hero lights a candle and "everything has a gray, sad color." This is the place of events, refracted through the feelings (perception) of the hero.

Mykhailo Kotsiubynskyi with great skill paints the environment from the point of view of the lyrical hero: "behind the black windows lies the world, flooded with night, and my house seems to me like a cabin of a ship sailing somewhere in an unknown black sea with me, with my longing and my horror" (2, 169).

The world flooded by night is associated with a flood, and the verb flooded with water. This allows the author to continue the metaphor: floating somewhere in the unknown black sea. And create an appropriate comparison: and my house seems to me like a cabin of a ship.

The developed metaphor depicts the universal loneliness of the lyrical hero. He is alone in the unknown black sea, he has no one to share his horror and grief with. 3. The hero realizes that he does something automatically: I even corrected the photo while passing the table. AT! Now it's symmetrical!..." [2, 169]. What a rich work of consciousness. She mints everything. However, M. Kotsyubynskyi wants to show not only the multifunctionality of consciousness. He prepares the reader for other involuntary events that will become the conflict of the sketch. On this map you can see very different phenomena of consciousness. Some of them are caused by the perception of external circumstances. These are sound (whistle), visual (interior), tactile (photo) signals that enter consciousness through the relevant organs.

The second part is internal (psychic) phenomena that enter consciousness and are verbalized - hallucinations, sexual feelings, signals from the subconscious, etc.

The third part is the direct "work of consciousness" - thoughts, memories, reflections on the future work, etc. For the first time and not only in his work, M. Kotsyubynskyi gives a detailed, complex and multi-phenomenal picture of the "work of consciousness" - the stream of consciousness. But this picture has not only a synchronic section, but also a diachronic one.

The topic of psyche "The apple blossom" was first published by M. Kotsyubynskyi in 1902. The second topic of Z. Freud (or the structural model of mental organization was first substantiated by him in the 1923 work "I and It". Therefore, M. Kotsyubynskyi was not familiar with either the first, not the second topic of Z. Freud (the Ukrainian writer died in 1913). We already mentioned the second topic of Z. Freud, in which he presented the mental organization of a person as Id - subconscious, Ego - I - consciousness and super-Ego - super-ego is self-awareness. We specifically use the word subconscious to denote processes that are not realized by a person. Many people mean these processes with the word unconscious. In our opinion, it is the topic (translated from Greek - place). The second topic by the arrangement of terms suggests itself on vertical construction:

Self-awareness over - I
Consciousness - I
Subconscious

From the point of view of the topic, it is possible to construct a map of the unfolding of the stream of consciousness, the stream depicted by M. Kotsyubynskyi in "The Apple Blossom". In the stream of consciousness of the lyrical hero depicted by M. Kotsyubynskyi, the perception of the external world and the awareness of this perception occupy a significant place. This is a natural "job" for "I". Yes, this is exactly

how the work begins - the perception of the breath of a small child - the daughter of the lyrical hero - suppressed by the disease (excerpt No. 1). The interior of the hut, which continues the perception of the outside world (No. 2), in addition, gives an impetus to "consciousness" to the work of imagination. Contrasting interior (#2) also conveys the hero's experiences - the struggle of life and death. An interesting detail (#3) - "fixed the photo." This is not yet the work of the subconscious, it is a "conditioned reflex" (according to I. P. Pavlov) or the lyrical hero always corrects the photograph so that it stands symmetrically, or he has already developed such an aesthetic instruction. But the psychological function of this detail is different, it prepares the reader for the perception of the following involuntary and sometimes subconscious actions. Let me remind you, I.R. Halperin writes about prospecting as follows: "Like retrospection, prospecting is one of the methods of storytelling, which allows the reader to more clearly imagine the connection and conditioning of events and episodes. Knowing what will happen next, he dives deeper into content-conceptual information, because the present appears before him in a slightly different way."

Literally after five lines, in which the lyrical hero continues to deeply experience a tragic situation - his daughter's incurable illness - suddenly an unmotivated thought "jumps out" from nowhere: "If only the end would be sooner!...". This is the cry of the subconscious, this is the Id [№5] of the lyrical hero, this is some unmotivated, as well as unmotivated, detail "fixed the photo". So, consciousness is not only verbalized thoughts, but also some impulses that, at first glance, cannot be explained. Since this will be discussed further, we will limit ourselves to these remarks. At the same time, the following episode [№6] again conveys the depth of the child's illness: "I listen. The slightest rustle or knock - and somehow the heart falls and freezes. It seems to me that something unusual will happen now: a creature with large black wings will enter through the window; a shadow will move across the house or someone will scream - and life will end..." [6].

The consciousness of the lyrical hero "works" on the verge of hallucination. But she returns to a normal state again [№7]: "...I don't hear my legs, I don't control them, they carry me by themselves, like a wound mechanism, and only my head, like a spider's web, scurries a lace of thoughts (emphasis ours - Yu.K.).»[7]. It works Ego - I of the lyrical hero, which continues the stream of consciousness, delves into the story of the night watchman's knocking and reflections on the started novel. This is how we learn that the lyrical hero is a writer. This is another level of the topic of the psychic world. Id - subconscious, Ego - "I" - consciousness and super-Ego - "super-I" - self-awareness. It is the writing activity that "flows" at this third level. The Super-Ego operates partly on the level of consciousness, partly on the level of the subconscious.

So, we see three levels of mental organization of the lyrical hero, they correspond to the three levels of "topic" defined by Sigmund Freud. In the process of unfolding the stream of consciousness, M. Kotsyubynskyi will "support" the image of all three levels of the topic.

The actual level of consciousness is Ego or "I". In the sketch "Apple Blossom" he is represented by many episodes:

1. Perception of the child's breathing and reaction to it. 2. Perception of the interior and "work of imagination". 4. Perception of the child's breathing and the "work" of the imagination. 6. Hallucinations (morbid "work" of consciousness). 7. "The Web of Thoughts" - an episode to the started novel. 8. Perception of the environment and reaction to it. 9. Perception of an interior that becomes darker and more threatening. 10. Hallucinations turn into delirium ("work" on the verge of illness). 11. Perception of the interior. 12. Bifurcation ("work" Ego and superEgo). 14. Perception of events. 17. Perception of events. 18. Thoughts. 19. Perception of events and parental reaction. 20. Perception of events. 22. Contrast: perception of nature. 23. Memory. 24. Perception of the environment and events.

2. Another level of "work" of the psyche is the Id subconscious. She occasionally makes herself known.

5. Zoik from the subconscious. 13. An exclamation from the subconscious. 15. Sexual feelings from the subconscious. Another level of "work" of the psyche is the super-Ego or "superego", or self-awareness:

16. Internal conflict between the parental "I" and the human "I". 21. Writer's "superego" and perception of events. 25. The writer's "superego" and the conflict with the parental "ego".

Such a detailed cognitive analysis is necessary, because for the first time the much more complex construction and structure of "Apple Blossom" and M. Kotsyubynskiy's much deeper understanding of the mental world of man are being argued for the first time than was believed until now. This is the artistic psychoanalysis of Kotsyubynsky.

So, the writer intuitively, in many ways from observations of himself, as well as of the "other", that is, other people, even before S. Freud, depicts the three-level organization of the human psyche:

- 1) Id - subconscious.
- 2) Ego - consciousness ("I").
- 3) super-Ego - self-awareness ("super-I").

Of course, this happens in the artistic form of the depiction of the lyrical hero of the sketch "Apple Blossom", but this is a new step in artistic cognition - artistic psychoanalysis - both for M. Kotsyubynskiy and for all Ukrainian literature.

Conclusions. 1. The term "artistic psychoanalysis" makes it possible to reveal the depth of the mental characteristics of the heroes of the work, to reveal the hidden mechanisms of their behavior.

1. Artistic psychoanalysis as a widespread phenomenon arose at the end of the 19th and the beginning of the 20th century due to the fact that the attention of artists of the word moved from the external objective world to the internal - mental world. Ivan Franko was one of the first to pay attention to this phenomenon.

2. The discovery of the laws of the inner world takes place in parallel in art (not only in literature - compare Salvador Dali and many others) and science.

3. One of the main researchers of the mental world of man was Sigmund Freud. He is responsible for the construction of psychoanalysis, which today is spread from

the USA through Europe, Vietnam to Australia. Psychoanalysis is also present in all humanities. Since psychoanalysis was banned in Soviet times, the study of its theory and applied nature is still far from the final stage.

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TECHNICAL SCIENCES

DEVELOPMENT AND IMPLEMENTATION OF INNOVATIVE EDUCATIONAL TECHNOLOGY IN TEACHING FOREIGN LANGUAGES TO FUTURE IT PROFESSIONALS

Yuliia Sabadosh,

Ph. D. of Pedagogical Sciences, Associate Professor;

Liudmyla Shevchenko,

Doctor of Pedagogical Sciences, Professor;

Valentina Frytsiuk,

Doctor of Pedagogical Sciences, Professor;

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Annotation. *The analysis of various approaches to capturing the essence of the "educational technology" concept allowed to determine that it is a systematic and multifunctional process that has connections (relationships) with almost all aspects of educational theory and practice, including subjects, objects, ideas, means and ways of organizing interaction between them to achieve the most effective form of planning, delivering, evaluating and managing the educational process. The study of scientific sources and educational practice allowed us to determine that the "educational technology" concept can be considered broadly: both as a branch of educational science, and as a specific educational technology developed and implemented with the aim to optimize education.*

It is proved that both traditional teaching methods using techniques that promote practical and mental activity, formation and development of cognitive interests and abilities, development of creative thinking, and innovative technologies should be used. The overall positive effect is achieved through combining different groups of innovations that take into account the problems of professional training and solve long-term tasks in the field of IT education. Examples of such technologies can be: non-simulation, simulation non-play, simulation through play, training and digital technologies. The analyzed technologies are personality-oriented, contribute to the inclusion of future IT professionals in design and research activities, which ensures not only the formation of knowledge, skills and abilities of professional activity and communication, but also the development of creative thinking, self-improvement abilities and the formation of soft skills.

A number of online courses and resources for learning a foreign language, which include authentic texts, videos in English, digital storytelling, e-books, movies, interviews with real IT professionals, listening materials, structured tasks for online working, glossaries and online translation tools have been singled out. Their use helps to expand the linguistic abilities of future IT professionals, helps them understand terminology, choose software development tools, read technical documents, study professional literature, take online courses and attend webinars, and freely communicate with clients and customers.

Keywords: *IT professionals, educational technology, innovative technology.*

There are ample opportunities to enhance the training of future IT professionals in modern higher education. One of them is to remove restrictions in professional

activities, which will enable them to embrace a much wider range of innovations. Through the reduction in the number of biased, rigid opinions and judgments and increase in the inflow of information, the required freedom of action and timely response to external changes are ensured. Accordingly, today's IT professionals should demonstrate high levels of professional competence, intelligence, communication skills, creativity, competitiveness, mobility, tolerance, innovative thinking, ability to make conscious and responsible choices; show readiness for lifelong self-directed learning and personal growth, efficiency in extraordinary situations and focus on unlocking one's creative potential. We are talking not only about the required new qualities of future IT professionals, but about an all-around new personality, a person with a whole new level of accomplishments. The development of the above-mentioned qualities in students and training them for innovative professional activities are not possible without the use of modern educational technology.

Before defining the concept of "innovative educational technology", let us consider the etymology of the word "technology" (from Greek *techne* – art, craft; *logos* – teaching, concept) which came to exist in connection with the technological progress and means the body of knowledge about the methods and means of processing materials. Therefore, the term "educational technology" literally means the theory of the art of teaching, teaching excellence (E. Zeer, D. Zavodchikov [1, p. 24]).

The concept of educational technology was initially introduced by the US Association for Educational Communications and Technology in the late 1970s of the last century, and the following definition was offered: "Educational technology is a complex, integrated process involving people, procedures, ideas, devices and organization, for analysing problems and devising, implementing, evaluating and managing solutions to those problems, involved in all aspects of human learning" [2, p. 19].

With many years of research in the field of education and psychology, the concept of "educational technology" has undergone numerous transformations, changes, and improvements and is still of interest to researchers in all countries. Many researchers representing the academia of different countries have been interested in the issues associated with the introduction of technology, including interactive technology, and innovations into the educational process.

Summarizing scholarly opinion, we can state that, by and large, educational technology serves as a unifier of all those aspects of the educational process that are aimed at efficient achievement of results.

Analysing the aspects, characteristics, and objectives of educational technology, it can be noted that, in its essence, it is aimed at improving the educational process through integrating traditional and innovative processes (Table 1).

V. Bezpalko [7], S. Vitvytska [16] specify the following important elements of educational technology: precise, consistent educational, didactic development of the learning goals; structuring, arranging, condensation of learning content and information to be retained; complex application of didactic, technical teaching aids and control tools, including computer based instruction; strengthening, as far as possible, of diagnostic

functions of education; guaranteeing a sufficiently high level of quality of instruction.

Table 1

Analysis of the definitions of "educational technology"

Author, source	Definition of the concept
Encyclopedia of Education [3, p. 661]	technology that ensures transformation of the educational process in educational institutions into purposeful activities of all its participants
Encyclopedic Dictionary of Education [4, p. 191]	a set of means and methods for reproducing theoretically justified education processes that enable achievement of the set learning goals
E. Zeer [5, p. 122]	model of joint educational activities of teachers and students in designing, organizing and conducting the educational process provided that the comfort of all process participants is ensured
D. Chernilevskii [6, p. 192]	a body of knowledge about the ways and means of implementing processes which result in qualitative changes in students; a system of orderly operations and actions that ensure the attainment of learning goals, content-, information- and procedure-related aspects of training aimed at the acquisition of systematic knowledge, professional skills and the development of students' soft competencies
V. Bezpalko [7, p. 114]	systematic and consistent implementation of a planned educational process into teaching practice, which is based on a systematic approach that ensures its reproducibility and target efficiency
V. Petruk [8, p. 91]	a combination of theoretical and practical advances, elements of traditional approaches and the latest achievements, whereas "teaching technology" is a way to implement the content of training provided for in curricula and the presentation of the system of teaching methods and techniques that ensure the most effective achievement of learning goals
P. Sikorskyi [9, p.7].	algorithm for assisting with effective acquisition of knowledge and skills, ensuring the achievement of learning goals
S. Zmeev [10, p. 42].	a system of actions of participants that guarantees the achievement of the set learning goals
O. Hrechanovska [11, p. 325].	organizational and educational actions of the teacher that ensure the effectiveness of the applied teaching methods, techniques and approaches with the use of innovations and contribute to the creation of a psychologically comfortable environment for the student during the educational process
O. Stepanov and M. Fitsula [12, p. 280]	a set of psychological and educational principles that determine a special approach and a combination of teaching methods, techniques, and aids (diagrams, drawings, graphs, maps)
H. Selevko [13, p. 95]	an educational system design implemented in practice to improve the teaching process through the purposeful use of techniques, methods, tools, events, relationships using innovative teaching methods

<p>O. Pometun and L. Pyrozhenko [14, p. 17]</p>	<p>a scientifically based educational (didactic) system that guarantees the achievement of a certain learning goal through a clearly defined sequence of actions aimed at reaching intermediate goals and a pre-determined final results</p>
<p>L. Shevchenko [15, p. 157]</p>	<p>the essence of educational technology is the pre-planning of the teaching process, taking into account didactic goals and the required level of acquisition of knowledge. Educational technology is student-oriented but the emphasis is both on the development of the students' educational and cognitive activities which allow them to achieve success through the students' own actions, and on the development of the individual as a whole: on setting goals and objective control over the quality of perception of the learning content. Finally, educational technology is aimed at implementing the principle of integrity of structure and content of the components of the educational process</p>

Also, considering the concept of "educational technology", scholars also see it as a semantic generalization which includes all the definitions and distinguish three aspects of educational technology: a) scientific (educational technology is a component of the pedagogical science that designs organizational and educational processes in educational systems); b) procedural–descriptive (process description, algorithm, a set of goals, methods and techniques to achieve guaranteed results, learning goals); c) procedural-instrumental (implementation of the technological process, functioning of all personal, instrumental and methodological teaching aids).

In the scholarly discourse, a number of characteristics of educational technology are considered. V. Slastenin points out: consistency, conceptuality, scientific nature, integrative nature, guaranteed results, reproducibility and the ability to replicate and transfer to new conditions, efficiency and quality of teaching, algorithmic nature, optimality. The scholar does not insist on the comprehensiveness of the proposed list of characteristics of "educational technology" and states that these characteristics are hardly indisputable; he singles out an integrating feature – reasonableness. At the same time, V. Slastenin defines educational technology as educational activities that implement the principles of learning and self- development to the maximum, and therefore ensure its results. The more fully these principles are understood and implemented by the teacher, the more guaranteed are the results [17, p. 335].

Essential for our research are the conclusions reached by M. Sibirskaja as for the advantages of educational technology in comparison with training based on the methods of teaching:

1) the basis of educational technology is a clear definition of the ultimate goal, the goal is considered to be its central component, which allows to determine the level of its achievement. In traditional pedagogy, goals are not the core issue, the degree of achievement is not clearly defined;

2) educational technology, in which the goal (ultimate, intermediate) is defined very precisely (diagnostically), allows developing objective methods for monitoring its achievement;

3) educational technology allows minimizing situations when the teacher is faced with a choice and is forced to resort to pedagogical experiments in search of an acceptable solution;

4) in contrast to the lesson plans which are teacher- and activity-centered, the educational technology offers the teaching process design which determines the structure and content of learning and cognitive activity of students, which results in greater stability of success of almost any number of students (Sibirskaja [18, p. 38]).

Based on the table of differences between the concepts of "methodology" and "technology" developed by V. Vialykh [17], we have compiled Table 2 and determined that educational technology is distinguished by technological efficiency, phasing, step-by-step approach, flexibility of techniques and actions performed by students.

Table 2

Comparative table of the concepts of "teaching methods" and "educational technology"

Teaching methods	Educational technology
the theory of the methods of teaching a particular discipline, subject	the theory of the art of teaching, teaching excellence
a set of methods, techniques, and forms of organization of activities aimed at accomplishing educational tasks	an ordered system of actions which lead to the guaranteed achievement of learning goals
a set of teaching techniques, methods and forms of organization of instruction	a system of teaching techniques, methods and forms of organization of instruction
focus mainly on learning outcomes	focus mainly on the learning process
an individualized set of teaching techniques and methods (it is difficult to share professional experience)	a less individualized system of teaching techniques and methods (with the possibility of sharing and expanding teachers' professional experience)
focus on the specifics of the discipline, emphasis on the quality and specific nature of educational information	focus on the universal connections between the disciplines, emphasis on the holistic world view structures of the educational system
provision of specific recommendations for organizing the teaching process	displaying of the dynamic procedural -nature of the teaching process
predominance of the educational and didactic dimension of educational information	transfer of knowledge from its research-based genesis to educational explication (interpretation)

We believe that the concept of "educational technology" is broader than the concept of "teaching methods" (scientists are continuously engaged in controversy about it). At the substantive and local levels, the concept of educational technology almost overlaps with the concept of teaching methods; the difference between them is in the placement of accents only. In technology, the procedural, quantitative, and computational components are more prominent, while the methods are more about the target, content, qualitative, and variable components. The technology differs from the methods in its reproducibility, stability of results, and the absence of many "ifs" (if the teacher is talented, if the students are capable, if resources are sufficient...). Through mixing technology with methods,

methods sometimes become a part of technology, and sometimes, vice versa, certain technologies become a part of teaching methods. The concept of technology can be considered not only narrowly – as a specific concept, but also broadly – as a branch of science.

Our analysis of the concepts of "didactics", "methodology" and "educational technology" can be represented by a diagram (fig. 1).

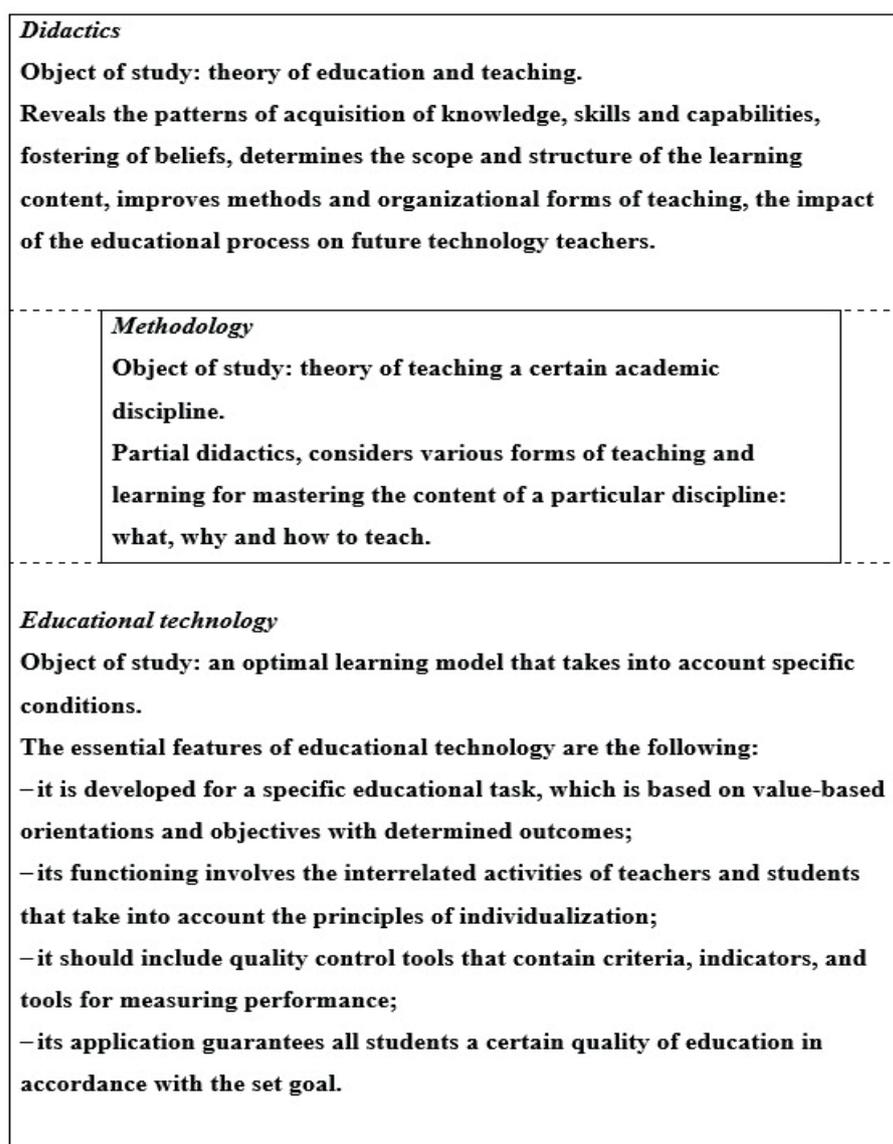


Fig. 1. Interrelation of the concepts of "didactics", "methodology" and "educational technology"

Researching the approaches to educational technology, we have taken interest in the approach of S. Vitvytska, who believes that educational technology should meet certain methodological requirements and criteria: "conceptuality (reliance on a certain concept containing philosophical, psychological, didactic and social-organizational-educational justifications for learning goals); consistency (educational technology should have all the characteristics of a system); process logic, interrelation of all its components, integrity; manageability (ability to set goals, design the teaching process, perform step-by-step diagnostics, vary methods and techniques in order to adjust results); efficiency (optimal costs, guaranteed achievement of target goals – a certain standard of teaching); reproducibility (possibility of application in other similar situations, by other process participants); unity of the content and procedural components, their interdependence" [16, pp. 190-191]. We believe that the criteria listed by the scholar are a prerequisite for positive results and introduction of innovations.

The scholarly studies found that innovative technologies are "forms and methods of classroom and extracurricular activities, precisely planned and introduced into the educational process, that are based on professional and individual psychological needs and abilities of students" (Yu. Sabadosh [19]).

For a long time, the existing traditions in learning foreign languages, when the methodology of teaching a foreign language provided for the study of the language as an ordinary academic discipline, with an emphasis on knowledge of grammar and vocabulary, and with little or no need to consider the language as a means for active communication or as a life skill, were front and center. This approach, supported by academic traditions of learning foreign languages at universities, is now neither relevant nor sufficient, especially in the context of online and blended learning. As the information load on students increases, the retention of learning content becomes more problematic for future IT professionals, the culture of education changes, the methods of presenting language content and monitoring individual progress get improved. Therefore, currently, the issue of developing and implementing innovative technologies for teaching foreign languages to future IT professionals is urgent.

Summarizing the research efforts of Z. Osad, O. Matviienko [20]; O. Lozova [21]; T. Sharhun et al. [22]; D. Chernilevskii [6] and our own educational experience, we classify the following types of technology as innovative educational technology for learning foreign languages by future IT professionals:

- non-simulation technology (lecture (problem-based lecture, exploratory lecture, interactive lecture, binary lecture, visualization lecture, dialogue-based lecture, tutorial lecture, press conference lecture, provocation-based lecture); seminar; tutorial, group tutorial; problem-based conference; brainstorming; discussions (group, cross-theme, progressive, free-floating discussions; expert group meeting; debate; competitive discussion; round table; "question-answer", "maze", "low voice discussion" methods, relay race; symposium; syndicate; court session; educational dialogue dispute; forum discussion); research work; conference; analysis; workshop; expert survey; structural and logical (task-based) techniques of training; computer assisted language learning

(CALL); storyline method, simulation, carousel, etc.), the use of which ensures the creation of the didactic and communicative environment, expansion of the scope of cooperation, subject-semantic communication, reflection and self-actualization at the "teacher-student", "student-student" levels in finding solutions to educational and professional tasks;

- non-play simulation technology (case studies; simulation exercises; group and individual trainings; quests; case technology; brainstorming; synectics; situational methods; situational analysis; contextual, developmental, inquiry-based learning, etc.) which involves simulation of professional environment and space and time conditions, ensuring the fulfilment of personal functions of future IT professionals in professional situations;

- simulation through play technology (organizational-proactive, search-testing, problem-oriented business and role-playing games; play-based classes using machine models and designing; game-based designing; group puzzles, training station methods; "contour" business games and simulation of situations) the use of which allows teachers to diversify the educational process, organize work by including professionally oriented exercises and tasks that contribute to the development of students' creative potential, broadening of their outlook, stimulation of critical thinking, independence and creativity;

- training technology (group training, classes with training elements), which is a system of actions to practice certain algorithms for future professional activities and ways to solve professional tasks in the educational process, it allows future IT professionals to demonstrate creative abilities (using the acquired knowledge of vocabulary, grammar, etc.), learn to express their opinion, give reasons for it, and respect the opinions of others;

- use of digital technology (programmable learning method, methods using web technologies, online, offline or blended learning modes) introduced in the "teacher-computer-student" system using various types of application programs. Also, in the educational process, tasks can be used that include videos for learning foreign languages, web browsing, online translation tools, digital storytelling, e-books, cartoons or films, as well as a number of courses and resources for learning foreign languages by future IT professionals, such as:

English for Information Technology textbooks by Pearson Longman (URL: http://www.pearsonlongman.com/vocationalenglish/information_technology/index.html) include grammar tasks that use specialized vocabulary, audio and interactive tasks based on the latest events in the IT industry.

FluentU cloud-based application (FluentU – foreign languages for IT professionals) (URL: <https://www.fluentu.com/schools/>) contains videos, audios, transcripts with interactive subtitles, flashcards, and other tools allowing learning English the way it is spoken in real life. The application features a variety of content from popular talk shows, music videos, commercials, trailers, and nature documentaries that get transformed into personalized lessons due to vocabulary tracking and intelligent selection of examples and videos based on words you've already learned.

Interactive online textbook with a built-in certification program The English for

Information Technology Course by English4IT (URL: <https://www.english4it.com/>) contains a wide range of learning sessions in American and British English, including: reading, writing, speaking, spelling and listening covering various professional topics such as software, hardware, programming, engineering, networks, databases, technical support, etc.

Oxford English for Information Technology e-book and CD, the course content is based on the latest developments in the IT industry, contains a number of authentic texts for reading, interviews with real IT professionals, listening materials, structured tasks and a comprehensive glossary.

Note that all the analysed technologies are personality-oriented, contribute to the engagement of future IT professionals in design and research activities, which ensures not only the acquisition of knowledge and professional and communication skills, but also the development of creative thinking, capacity for self-improvement, broadening of their outlook.

We believe that the use of training and digital technologies works most effectively in the process of training future IT professionals for work in the professional environment, since their introduction ensures a high level of cognitive independence in students, and also allows them to switch from the position of the object of instruction to the position of the subject in activities and communication.

All the above types of educational technology are used by us in preparing future IT professionals for professional activities. It should be noted that their choice depends on a number of criteria, which we give below:

- each technology is designed for a specific educational task, which is based on value orientations, targets and professional tasks that correspond to the results and competencies specified in the educational and professional program;
- their functioning involves the interrelated activities of teachers and students, taking into account the principles of individual-centred, competence- and activity-based approaches;
- they take into account which aspect of learning a foreign language prevails in teaching, for example: lexical or grammatical, direct, translation-based or mixed, which choice is correlated by audiolingual, audiovisual, visual techniques;
- they take into account the peculiarities of developing the foreign language competence of future IT professionals by means of innovative technologies, and namely: integrative, interactive-reflexive, assertive and social.
- in the course of their design, quality control tools are developed and introduced, containing criteria, indicators and tools for measuring the results of professional training;
- it is analysed how their use guarantees future IT professionals a high level of professional qualifications.

Research Conclusions and Prospects. Researching the introduction of innovative technology for learning foreign languages by future professionals in the field of information technology, we believe that the methodology of their implementation differs from that used for general foreign language courses because they are developed

to meet the specific needs of higher education students, related in content to their future professional activities, are based on the use of authentic documents, complex texts, materials and specialized terminology covering a wide range of IT industry topics (information security, graphical interface, website creation, server configuration, etc.). In addition, students are empowered to develop their soft skills (communication skills for communicating with foreign colleagues and clients without an interpreter, handling business correspondence; the ability to speak publicly to present their ideas, past projects; teamwork skills; leadership skills and personal qualities, etc.).

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