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OBSAH

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ECONOMICS

STUDY OF THE LABOR MARKET CONDITION OF UKRAINE IN 2015-2017

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Annotation. *It is researched in the article the labor market of Ukraine, it deals with such concepts as "labor market", "economically active population", "employed population", "unemployed population". The dynamics of the population of Ukraine for 27 years is monitored. The general structure of the economically active population of Ukraine has been formed. The main indicators and parameters of the Ukrainian labor market in dynamics are analyzed, which enabled to detect diametrically opposite dynamics between the level of the employed population and the share of the unemployed population. The structure of the registered unemployed population by the level of education is researched. The structure of vacancies and registered unemployed population in Ukraine by types of activity has been formed and the correlation between the obtained results and the dynamics of the employed population of Ukraine by types of economic activity has been researched.*

Key words: *labor market, population, labor force, labor resources, economically active population, engaged in economic activity (employed population), able-bodied persons, unemployed population, vacancies, informally employed, work abroad, dynamics*

Problem statement. Labor resources make up 57,4% of the total population in Ukraine. From these, 56,3% are working-age people, and 3,3% – pensioners and adolescents. Almost 71% of the working-age population lives in the cities. The employed population in Ukraine is 37,8% of its total population. Among them, more than half are persons aged 30-49 who have a sufficiently high level of professional qualification and education. The share of specialists with higher and secondary special education as part of the employed population is about 29%. At the same time, there is a high level of unemployment, the outflow of skilled personnel beyond Ukraine, the lack of supply and demand for labor resources in the labor market of Ukraine.

The research objective. The purpose of this article is to study and characterize the state of the labor market of Ukraine in recent years (2015-2017), also analyzing the negative trends in this area.

Literature review. Problems of employment and the development of the labor market in Ukraine in one way or another regularly attract the attention of domestic media, politicians and researchers. Domestic and foreign scholars are constantly publishing

research papers in this area, but information will never be outdated, as the Ukrainian labor market is constantly changing, both under the influence of economic factors and political, social, and international events.

Main results of the study. The starting point for determining the quantitative characteristics of Ukraine's labor resources is the actual population, so, speaking of the state of the labor market, it is first necessary to analyze the dynamics of the population of Ukraine (Fig. 1).

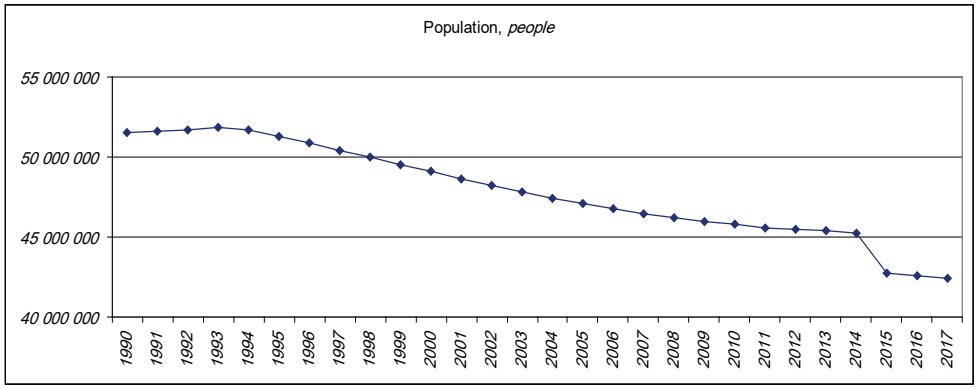


Fig. 1. The dynamics of the population of Ukraine in 1990-2017
Source: Built by the author based on data [1]

As it can be seen from the Fig. 1 in 1990 (data provided since 1990 as since July 16, 1990, Verkhovna Rada of Ukrainian Soviet Socialist Republic adopted the Declaration on State Sovereignty of Ukraine), there were 51 556 500 people in Ukraine. Population growth continued until 1993 and amounted to 51 870 400. Further, since 1994, the population of the country has been gradually reduced and in 2017 there were 42 414 900 people. The causes of population decline are low birth rates due to the rather low level of economic and social life of the majority of the population, as well as the unstable political situation through which some people migrate to other countries. In addition, the main reason for a significant decrease in the population of Ukraine in 2015 (by 5,5% compared to 2014, while the annual population decline of Ukraine in 1990-2014 remained at the level of 1990-1993 –0,13-0,31%, 1994-2004 – 0,8-0,93%, 2005-2012 – 0,32-0,72%, 2013-2014 – 0,18-0,28% to the previous year) is a military-political situation, produced by relations with Russia. It was this year that there was a high mortality rate of the economically active population of Ukraine, the young people who were the first to protect Ukraine's borders from Russian aggressors, and perished. Due to the military-political conflict, which still continues in the east of Ukraine, the population of Ukraine since 2015 and till now falls (it is kept at the level of 0,39-0,41% reduction to the previous year).

If we compare the population in 1990 and 2017, then the population of Ukraine has decreased by 9 141 600 people, or by about 18%. The data are inaccurate, since the last

official census in Ukraine took place in 2001.

The characteristic of the labor market in Ukraine requires the use of terms such as the "labor market" and "economically active population".

According to the Ukrainian legislation, "the labor market is a system of legal, socio-labor, economic and organizational relations that arise between persons who seeking employment, employees, trade unions, employers and their organizations, state authorities in the field of meeting the needs of employees in employment, and employers – in hiring workers in accordance with the law "[2, Section I, Article 1].

According to the content of Wikipedia – a free encyclopedia [3], "the economically active population is a part of the population of both sexes, which for a certain period provides a supply of its labor for the production of goods and services." The economically active population includes 2 categories of people aged 15-70 years old – employed population in economic activity and unemployed population. The general structure of the economically active population is presented in Fig. 2

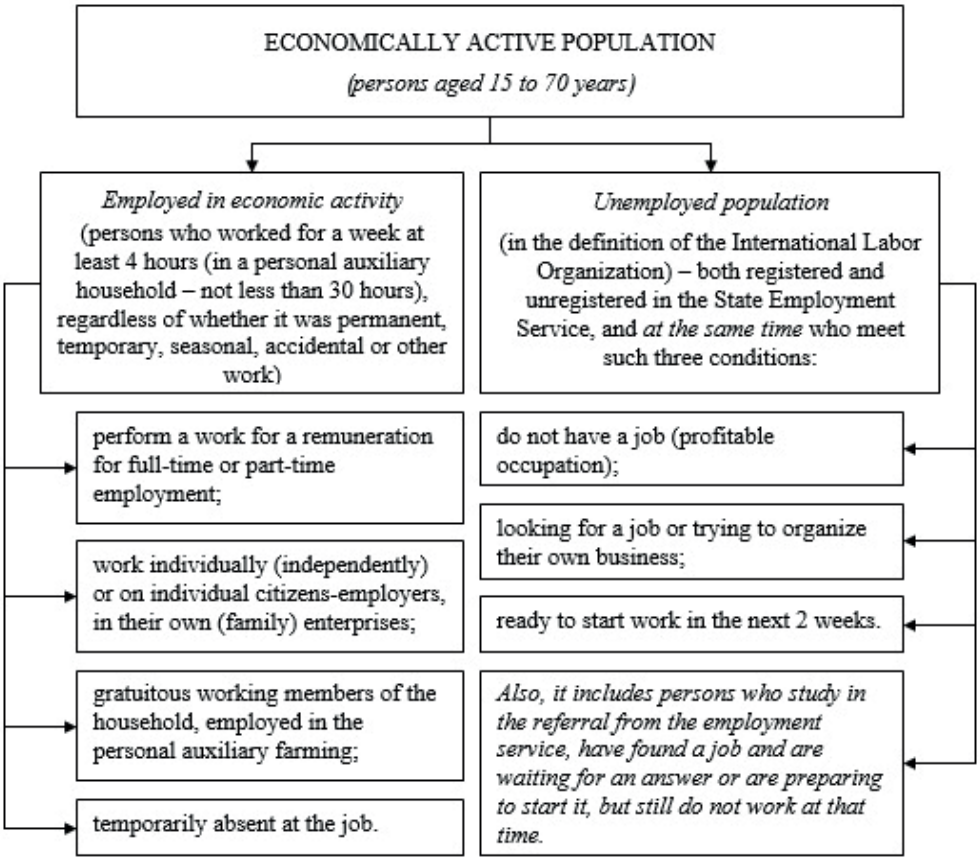


Fig. 2. The general structure of the economically active population of Ukraine
Source: Formed by the author based on data [3]

In this case, it is also appropriate to confirm the following freely available information by reference to the norms of the Ukrainian legislation regarding the definition of concepts in the chosen direction of the study:

– "unemployed" – a person aged from 15 to 70, who, due to the lack of work, does not have earnings or other income provided by the legislation as a source of income, is ready and able to begin to work [2, Section I, Article 1];

– "unemployed population" (according to the ILO methodology) – persons who do not have work, are actively looking for it and are ready to proceed to it within the next two weeks [5, section "Definition of terms"];

– "persons of working age" – persons under the age of 16 who have not reached the age specified in Article 26 of the Law of Ukraine "About Compulsory State Pension Insurance" (persons have the right to appoint a retirement pension after reaching the age of 60 in the presence of an insurance record not less than 15 years by December 31, 2017 [4, Section III, Article 26]) [2, Section I, Article 1];

– "able-bodied persons" – persons aged 16 and residing in Ukraine and for health reasons capable of active labor activity [2, Section I, Article 1];

– "economically active population (labor force)" – persons aged 15-70 who, during a certain period of time provide a supply of labor at the labor market [5, section "Definition of terms"]. By the way, the maximum age (defined in Ukraine for the economically active population at the level of 70) may vary in different countries, but in the most European countries it is not defined at all (i.e., economically active population is determined by persons aged 15 and over).

The economically active population consists of the population of both sexes, which for a certain period of time provides a supply of labor for the market production of goods and services, as well as some types of non-market production that are part of the System of National Accounts and are economic activities. The part of the economically active population includes only those who were engaged in economic activity or were looking for work and were ready to proceed to it, that is, they are classified as "employed" or "unemployed" [5, section 3, "Classification of the population by economic activity"].

Taking into account the international approaches and national characteristics of the engaged economic activity (hereinafter – "employed population"), persons aged 15-70 years who during the surveyed week are considered:

– worked at least 1 hour: for hiring for a fee in cash or in kind, individually (on their own), at individual citizens or at their own (family) enterprise, or worked for free at the enterprise, in their own affairs belonging to any of the members households, or in a personal farm for the purpose of selling products produced as a result of this activity;

– persons who were temporarily absent at the work, that is, formally had a work place, own enterprise (own business), but did not work during the period under examination from personally independent circumstances [5, section 3, "Classification of the population by economic activity"].

According to the State Statistics Committee of Ukraine [1], the number of economically active population in the past 3 years has decreased by 1,35% (from 18

097.9 to 17 854.4 thousand people). The number of the employed population of working age has decreased from 15 742.0 to 15 495.9 thousand, which led to an increase of the number of unemployed able-bodied age by 2,57% (from 1 654.0 to 1 697.3 thousand people) (Table 1).

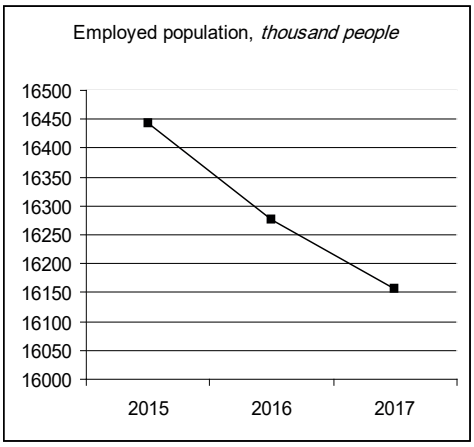
Table 1

The main indicators of the labor market of Ukraine in 2015-2017

Year	Economically active population				including:							
	aged from 15 to 70		working-age population		employed in economic activity				unemployed population (according to the ILO methodology			
					aged from 15 to 70		working-age population		aged from 15 to 70		working-age population	
	on average, thousand persons	in % of the population of the corresponding age group	on average, thousand persons	in % of the population of the corresponding age group	on average, thousand persons	in % of the population of the corresponding age group	on average, thousand persons	in % of the population of the corresponding age group	on average, thousand persons	in % to the economically active population of the corresponding age group	on average, thousand persons	in% to the economically active population of the corresponding age group
2015	18097,9	64,4	17396,0	71,5	16443,2	56,7	15742,0	64,7	1654,7	9,1	1654,0	9,5
2016	17955,1	62,2	17303,6	71,1	16276,9	56,3	15626,1	64,2	1678,2	9,3	1677,5	9,7
2017	17854,4	62,0	17193,2	71,5	16156,4	56,1	15495,9	64,5	1698,0	9,5	1697,3	9,9

Source: data from the [1]

As it can be seen from the figures shown, it is observed diametrically opposite dynamics – reducing the level of employment and increasing the proportion of unemployed population (Fig. 3).



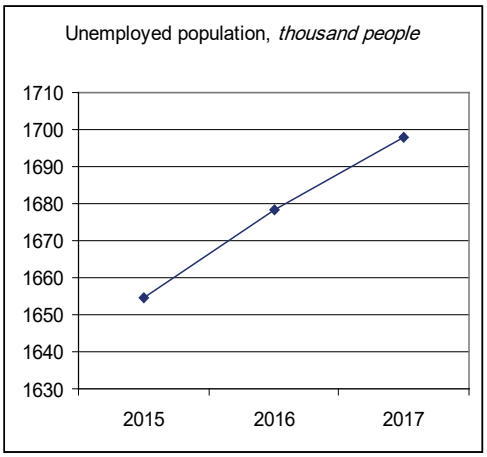


Fig. 3. Interdynamics of the economically active population of Ukraine

Source: constructed by the author on the basis of the data processing in Table 1

Unemployment population has always been and will be a very acute issue for Ukraine. Despite the fact that recently the Ukrainian labor market is developing in the context of significant changes in wages – in the direction of increasing (Table 2 – the coefficient of labor turnover for dismissing is higher than the turnover rate of the labor force for admission of employees and such dynamics increases), – still, people are in no hurry to take vacancies and stay in one job for a long period: either because of distrust of the state, and because of rapid inflation processes (since the growth rate of inflation is higher than the growth rate of wages, thus official increase in labor costs "eaten up" by inflation) and through more affordable mobility programs to other countries for Ukrainian citizens (especially for young people), attracting both higher wages and stable living in such countries. Unemployment in Ukraine creates a whole range of problems: decreasing the purchasing power of the population, the budget loses taxpayers, the enterprise – the personnel, the risk of social tension increases, additional expenses for the support of the unemployed population.

At the same time, it is also should be known that not all unemployed people in Ukraine are registered in state employment centers, and therefore the level of registered unemployment is lower than real. By contrast, in Ukraine there is also the so-called "hidden unemployment", which is when the number of workers at enterprises exceeds the optimal level (that is, there are "superfluous" workers) or employees do not work because of the enterprise downtime.

It is interesting that the structure of the unemployed population is dominated by the people with higher education (Fig. 4).

Table 2

The main parameters of the Ukrainian labor market in 2015-2017

Year	The average number of the full-time employees,	Coefficient of labor turnover		Average monthly salary		
		thousand persons	on the dismiss of employees	nominal		real
		in % to the average number of full-time employees		UAH	in% to the subsistence minimum for able-bodied persons	in % to the previous year
2015	8 065	24,0	30,2	4 195	304,4	79,8
2016	7 868	26,1	29,2	5 183	323,9	109,0
2017	7 679	30,5	31,8	7 104	403,2	119,1

Source: data from the [1]

One of the main reasons for this situation is the unemployment increasing among the young people due to the labor market over-saturation and unnecessary number of specialists in the amount that they are graduated from higher education institutions namely from the economic specialties: the supply and demand for specialists with vocational education in 2017 was much larger than on professions requiring higher education.

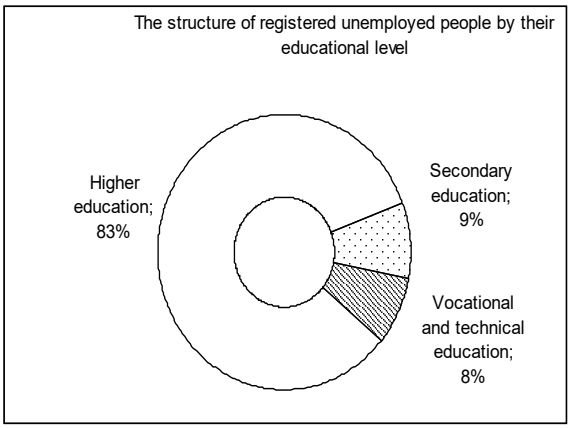


Fig. 4. The structure of the registered unemployed by their level of education, on December 2017

Source: Built by the author according to [1]

In order to investigate this phenomenon in more detail, it is worth analyzing the structure of vacancies and the unemployed by the type of activity. In such statistics information is displayed only by registered unemployed, as this information will be official. The given structure reflects the situation in the city of Kyiv, the capital of Ukraine and the largest employer city in Ukraine, since at the moment such an analysis will not be quite reliable throughout Ukraine. About the state of the labor market in

Donetsk and Luhansk regions (east of Ukraine, place, where it is still military processes ongoing) should be mentioned separately. Because of Russian aggression, these areas not only lost much of their economic, especially industrial, potential, but are in a zone of high socio-psychological and economic risk. Therefore, even in regions controlled by the Ukrainian authorities, the employment rate of the population is significantly lower, and the unemployment rate is much higher than in other regions of Ukraine. Thus, the generalization of the information on the example of the capital of Ukraine (Kiev) is quite fair.

Fig. 5 displays generalized information in dynamics for two years – 2016 and 2017, which is the most rational reflection of the depicted phenomena – offered vacancies and registered unemployed. We are invited to consider this dynamics in one graph, as in this case it is possible to trace trends in the labor market very clearly.

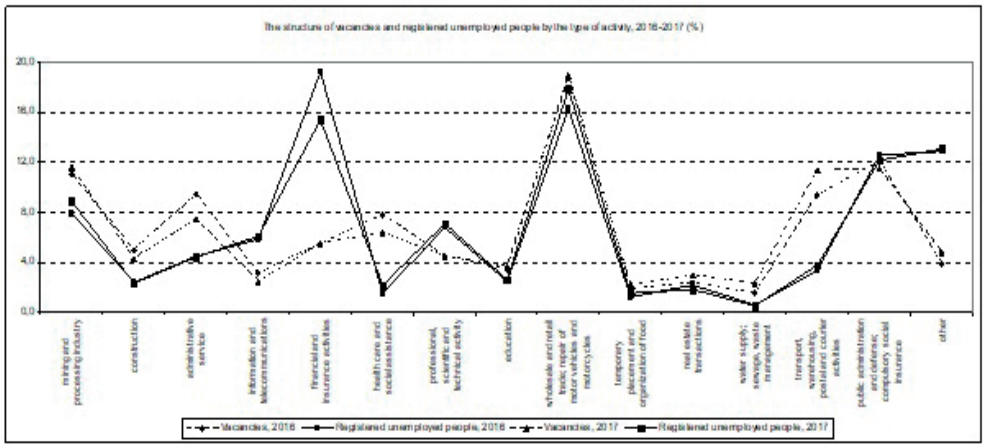


Fig. 5. The structure of vacancies and registered unemployed population by the types of activities in Kyiv, 2016-2017 (%)

Source: Built by the author on the basis of the data processing in [6]

As a confirmation of the earlier conclusion, the most number of registered unemployed is exactly in economic activities directions, but there are not so many vacancies there (for example, financial and insurance activities, professional, scientific and technical activities, information and telecommunications). At present times, the Ukrainian market needs (data is provided when there is a high level of disagreement between vacancies and people who ready to work in this areas) specialists in the fields of industry, construction, administrative services, health care and provision of social assistance, water supply and waste management, transport and warehousing. In this way, the structure presented in Fig. 4 becomes more understandable – indeed, in the above-mentioned areas, where technical education is more important, and Ukraine needs such specialists, they are not enough. But for people with higher education (and mostly it is economic), vacancies are not so much at the moment – the pace of the new job creation

in these areas is lower than the rate of the emergence of new specialists with diplomas.

The given structure (see Fig. 5) also confirms the data on the employed population by types of economic activity (Fig. 6). In 2015-2017 it is almost the same structure of the employed population by types of economic activity, therefore the diagram is presented for 2017: the largest share (21,6%) is occupied by wholesale and retail trade, repair of motor vehicles and motorcycles, at the second place (17,6%) – agriculture, forestry and fish farming, at the third (15,3%) – industry. The largest number of economically active population in 2017 is observed in the age group of 40-49 years. The number of economically inactive – in the age group of 60-70 years.

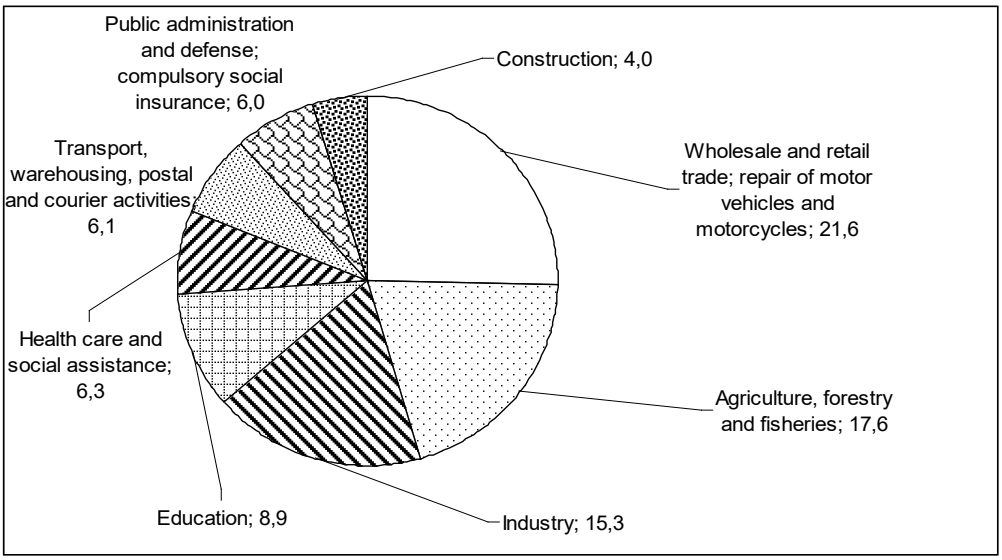


Fig. 6. The employed population of Ukraine by types of economic activity in 2017
Source: built by the author on the basis of [1]

At the same time, more comprehensive picture of the sectoral supply-demand balance and labor supply at the Ukrainian market are provided by the data of the SSC (State Statistics Service). According to this service, during 2017 the number of vacancies declared by employers amounted to 722,7 thousand units, which is on 101,8 thousand vacancies more than previous year (2016). At December 1, 2017, there were 77,0 thousand vacancies in the database of the employment service, which is on 43% more than on December 1, 2016 [7]. In December 2017, according to the vacancy rate of the labor market, Ukraine returned to the level of 2014. Four years ago five people, on average, applied for the one work place (job), in 2017 – it was 4. However, again, the market needs more technical specialists, which is lacking in Ukraine.

This situation produces some consequences – the loss of work or an inability to get permanent job with full employment, create a number of problems in the short term period – stress, decreasing of income level, loss of habitual social status, and, consequently, decreasing of mental and physical health and welfare, and that all reflected

on the welfare level of the entire state.

One of the negative phenomena of the modern labor market in Ukraine is also displacement of a part of the employed population from the official sector of the economy to the informal, "shadow" one. In 2016-2018 certain changes experienced the age structure of informally employed. The proportion of informally employed among the employed population of the working age has increased, and among the population of retirement age (60-70 years) – on the contrary, has decreased. The highest level of informal employment was recorded among young people (15-24 years old) and the elderly (60-70 years).

Conclusions and recommendations. Thus, the general tendency of the labor market of Ukraine is not comforting: due to the difficult political situation and economic factors, the Ukrainian population is in a difficult social situation. Those who have the opportunity leave Ukraine and look for work abroad. Those who do not have this opportunity – or work for a very low salary, or replenish the ranks of the unemployed. This is confirmed by the fact that the demand for skilled workers is growing at a relatively high pace. And since the domestic market for such a labor force competes with the European market, where similar posts are paid much higher, the problem of the shortage of skilled labor in Ukraine can be substantially aggravated in the coming years. The government of Ukraine needs to stabilize the state's economy, resolve political disputes and get rid of, or at least reduce unemployment among able-bodied youth, and raise the welfare level of the population to support young Ukrainian skilled to labor market of Ukraine, but not to other states.

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BASIC DIRECTIONAL DEVELOPMENT AND IDENTIFICATION OF THE POLICY OF INTERNAL POWER SUPPLY OF UKRAINE

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Annotation. *In the statistics of the economic situation in Ukraine and the modern camp of the state cadres. It is important to be characterized by unstable conditions, by increasing the amount of credit, problems of social and economic character, low rates of bargaining bargains, stagnation of promising branch and poor economic conditions. The total volume of Ukraine's public debt, which is now at a significant level and its phase of growth, is threatening. Given the current situation in Ukraine in recent years, due to the dependence on external lending and the prospects for long years of returning received funds, the issue of improving the management of the policy of domestic state borrowing is relevant and extremely important. The conducted analysis of the market of government securities will allow to predict its further development and determine the features of its transformation in the future, which will be reflected in further research.*

Key words: *government securities; government bonds; State debt; government deficit, government securities market; primary market; secondary market.*

In connection with the political and economic instability in the country for a long time there are problems with public debt, exceeding its safe and marginal indicators. It should be notised that optimization of public finance management includes improvement of the main elements of the budget mechanism, such as the development of the medium-term forecasting and planning system, the improvement of the program-targeted approach in the budget process, the analysis of the efficiency and results of budget execution, budget planning and execution, as well as public debt management in accordance with international standards. Medium-term budget planning includes several interrelated components. The most important of these are budget spending limits, which are brought to the main spending units. It is within the limits of budget spending limits that the main administrators, in accordance with their [1].

In our opinion, in order to fulfill the planned limits, it is necessary to ensure compliance with the projected level of the revenue part of the budget and the level of budget deficit, and therefore, the planned amount of public debt. Therefore, the primary task directed at the implementation of the European vector of Ukraine is the adaptation and application of mechanisms of foreign experience in providing high-quality medium-term forecasting and planning.

Thus, annual budget plans and programs in the field of public borrowing in the EU countries are drawn up in accordance with the medium-term budgetary projection, which contains information on the main macroeconomic indicators, budget revenues and expenditures, description and evaluation of the policy measures to be taken to achieve

the proposed objectives, analysis of the impact of changes in key economic indicators on the state of the budget and public debt, the definition of medium-term monetary policy objectives and their relationship with the stability of the exchange rate. This information in the EU covers the previous and current years and at least three of the following.

The analysis of the set of threats requires a comprehensive system approach to solving the issues of guaranteeing the financial security of the state. The security of the financial sector in terms of its components depends on economic activity, the balance of incomes and expenditures of economic entities and population, and on state policy in the budget, tax, monetary and other sectors serving the financial flows. The complex effect of these factors determines the state of the components of the economic security of the real and financial sectors, the analysis of which makes it possible to identify ways to avoid threats and activities of the state to ensure compliance with national economic interests.

In our opinion, it would be advisable to implement the medium-term budgetary forecasting efficiency index as practiced in the European Union. The availability of such tools will help to respond more quickly to the risks that affect the budget and increase the threat of increasing the debt burden on the national economy. By adapting the EU experience to domestic realities, our country will have the opportunity to improve the effectiveness of medium-term fiscal forecasting and planning with the achievement of the following results:

- availability at the state and local levels of a well-balanced system of forecasting income and expenditure of the budget;
- strengthening the interdependence of the budget formation for the current year and the medium-term budget forecast as a result of creating mechanisms for the realization of budget decision-making through the implementation of legislative norms;
- impossibility of political influence on budget decisions;
- cooperation between the bodies responsible for budget preparation and budget forecasting at the state and local levels, mechanisms for improving this cooperation;
- availability of effective state resources planning programs, as opposed to annual dependence on the current budget.

In order to fulfill tasks in the field of European cooperation, the Government of Ukraine approved the plan for the implementation of the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand, from the other side, for the years 2014-2017. [2].

Although the Association Agreement between Ukraine and the EU does not contain clear parameters of restrictions for the formation of debt policy, such restrictions are set out in the Treaty establishing the European Union. Yes, Art. 104 of the Treaty states that member states of the EU should avoid excessive government deficits. At the same time, the European Commission is assigned the task of monitoring the budget situation and indicators of public debt to detect material errors [3].

In 2017, the State Debt Management Program for 2017 [4] and the Strategy for

Reforming the Public Finances Management System for 2017-2020 [5] were approved. The fifth part of the Strategy defines the main tasks of debt management: 1) increasing the sustainability of public debt; 2) creation of conditions for reduction of the share of public debt denominated in foreign currency, by developing the market of domestic government bond bonds denominated in the national currency; 3) expansion of the investor base in government securities.

The expected results of the tasks should be (and certain results already exist) [6]: approval of the medium-term strategy of public debt management for 2018-2020 in 2017; Presence of actual price benchmarks based on the results of placement of domestic state-denominated bonds denominated in the national currency, from three months to five years (2018); the opening by the leading European depository of an account at the Depository of the National Bank. In Ukraine, the focus on the limit of public debt under the Budget Code (60%) does not contribute to responsible government debt management and is at risk of financial destabilization [7].

The main reasons for the increase in debt burden are the devaluation of the hryvnia (which led to an increase in the debt and the cost of its servicing), a decline in real GDP, a decrease in domestic consumer demand due to inflationary processes and unemployment, a negative impact of the real interest rate of the NBU on the debt, limiting the functioning of the loan capital market, a number of budget problems, in particular: the need to cover the deficit of the Pension Fund, the financing of state budget deficit from state borrowings in, which increase was due to growth in defense spending and public debt service; non-fulfillment of revenue plans for privatization of state property; the need for state support of state enterprises and banks.

Under these conditions, the tendency to increase the share of government-guaranteed debt affected the level of debt security of the country, while the increase in the share of public debt in foreign currency triggered an increase in government currency expenses for servicing debt, which created conditions for further devaluation of hryvnia [8].

Consequently, when developing a policy on debt management, strategic guidelines, including through the use of a risk management model, must be taken into account; absolute and indicative limits are set. Separately determine the portfolio of the most significant indicators that characterize the state debt, requirements for methodology and reporting on debt management issues.

It is worthwhile, in our opinion, to pay attention to the need for a broad coverage and public discussion of the main elements of debt policy implemented by the authorities. The transition of Ukraine from a rather closed internal to a competitive international market of state debt determines the creation of public debt management bodies not only at the state but also at the local level. Hence, the top management of the country may face serious difficulties in managing public debt in Ukraine as a whole.

Therefore, given the close relationship between the financial systems of European countries, the problems that arise in the field of public finances in one country have a negative chain reaction for others. However, despite the efficiency gained in the field of public debt management in the European Union, its debt policy, as recognized by the

International Monetary Fund, still needs further improvement. [9]:

1. The European Union is invited to simplify some budgetary rules, which will facilitate a quicker response to the threat of raising the level of public debt.

2. The European Union should create a separate structure that will take care of the formation of a single debt policy, based on effective control over budget planning and implementation of budget expenditures [10], along with the fact that the EU has a European central bank, which has a largely centralized effect on public finances and the debt policy of this association.

The European Central Bank, along with the central banks of EU member states, controls the circulation of government securities, which are an important asset for public and private investors. The central bank, as a rule, holds rather large amounts of reserves in the form of debt securities.

Note that such a policy is being implemented in Ukraine. Thus, as of the end of August 2015, the share of government bonds in the National Bank of Ukraine portfolio totaling UAH 489.5 bn equaled 74.8%. Given the significant role of government debt instruments in the activities of the NBU, it is important to analyze the requirements of the European Union to the policy of central banks in the area of public debt. As of the beginning of September 2017, the total amount of Internal State Bond Loan (ISBL) in circulation (by principal amount) is almost 81% of the deposit portfolio of banks and 72% of the bank's loan portfolio. In some periods, significant volumes of ISBL issued were aimed at the pre-capitalization of banks and business entities of the state sector of the economy, which contributed to strengthening the stability and stability of the relevant actors and stabilizing the financial sector. The most significant increase in the portfolio of government bonds in recent years banks. From the beginning of 2016 to October 2017, the volume of the said portfolio grew 3.8 times - from UAH 82 billion. up to UAH 309 billion by the sum of the principal debt [8].

According to the requirements of Art. 101 The Treaty establishing the EU, the credit for deficits and any other loans granted by the ECB or by the central banks of Member States are prohibited from providing to institutions or bodies of the Community, central governments, regional, local or other public bodies and bodies governed by public law, or state enterprises of the Member States. The ECB and the national central banks are also not allowed to purchase debt obligations directly in them. However, this provision does not apply to state-owned lending institutions, which are granted by the national central banks and the ECB in the same way as private lending institutions. It was in accordance with the rules of this article that the ECB pursued an active policy in the wake of the financial and economic crisis.

The European Central Bank has temporarily suspended the use of a minimum threshold of credit ratings relative to debt instruments issued or guaranteed by the central government. These are, in particular, securities of the euro area countries that receive financial assistance from the EU and the IMF or plan to receive it within the framework of the relevant program.

Also, the European Central Bank has made a decision that states that, as collateral

for its loans, the banks of the EU member states will be able to use not only euro-denominated debt securities, but also securities in other currencies: in particular, in US dollars, pounds sterling and in Japanese Yen. Experts believe that due to such measures, the ECB expects to expand refinancing operations of the European banking sector, which will enable it to increase lending and to avoid the manifestations of the financial crisis. [8].

Thus, Ukraine faced a debt area on the path to EU integration, there was an urgent need to improve the structure of public debt by attracting investors who would invest financial resources in the long-term. Now in Ukraine there are many investors interested in short government debt instruments. While long-term investors, such as pension funds, count on regular risk-free interest payment flows in order to guarantee their retirement benefits.

Enabling long-term investment can significantly stabilize the system of public debt management and the financial system of the country as a whole. The improvement of the situation on the markets of public debt, as convincing practice, instantly extends to all adjacent markets. Debt securities can play a stabilizing role only if they are properly designed, transparent, fully liquid, and cover the most important revenue segments. When violating even one of these requirements, financial market participants should find alternative ways of investing.

In some cases, entire market segments may be under threat, remain undeveloped, or even detached. For any country, it is important to achieve minimization of public debt spending with a long-term perspective. Despite this, even today, the term "acceptable risk" for such calculations remains uncertain, annual reports of European states confirm the crucial importance of the interaction between costs and risks, which determines the relevance of these aspects and changes the analytical basis for managing public debt. This is due to the fact that public debt management competes with a similar set of instruments in the same markets where private financial institutions operate.

Thus, the optimization of the structure of state borrowing depends on the indicators of tax revenues and the implementation of the state budget expenditures. As an element of the debt policy, monitoring allows monitoring the level of efficiency of public debt management and the use of certain debt instruments. In this case, a separate goal requires the formation of various indicators of management effectiveness, each of which can be measured by the extent of its achievement.

The issuance of significant volumes of short-term debt instruments threatens the efforts of the National Bank of Ukraine aimed at keeping inflation low. If the NBU has reliable information about the impact of the debt repayment structure on monetary policy, public debt management can only be used to achieve the appropriate optimal structure of these mechanisms. The monitoring would then be used to verify the implementation of the goals set by the National Bank of Ukraine. In this context, one can rely on reconciling the objectives of debt and monetary policy.

In order to control the management of public debt, in our opinion, it is necessary to take into account the changes and trends available on the financial market. Given

the European aspirations of Ukraine, the relevant indicators for the country can be developed in close cooperation with the participants of not only Ukrainian, but also European markets, research institutes and regulatory bodies of Ukraine and the EU.

The management of public debt in the European Union depends to a large extent on the laws of the market. The effect of these laws is quite powerful for regulating the economies of those countries that do not conform to market principles. The Government of Ukraine, when defining tasks that will ensure economic growth and optimize financial policy with the attraction of external debt and investment resources, must take into account the factors of hard competition in the broad international market [8].

Note that countries such as Ukraine, with a significant share of external debt in GDP, are often subjected to force majeure as a result of the realization of the risk of exchange rate changes. Any devaluation of the local currency conceals the danger of a serious budget crisis.

We emphasize that there is a need to expand international cooperation in the management of public debt. Since the possibility of transferring a "financial instability virus" to one country to the global financial system as a whole has increased, public debt management has become a problem of international rather than national scale. If all countries were to comply with the minimum risk standards for public debt management, decision-making processes in financial markets would be appropriately adjusted. Therefore, unlike many other spheres of the economy, the government of Ukraine needs to pay special attention to the development of a strategy and implementation of public debt management operations.

European practice shows that the public debt management process is open. All countries of the European Monetary Union, with the exception of Italy and Finland, publish debit notes annually. Relevant supervisors work out documents and evaluate measures taken by national debt management authorities. The content of the annual debt reports differs significantly from that of the member states of the European Union. While some of them provide daily detailed information on debt management operations, most focus on general information, which partially includes data on public debt management. Such reports are provided for extensive reviews of economic developments in the debt market, assessment of debt management activities, as well as future activities in this area. [8].

All national annual reports define the primary objective of public debt management as a minimization of costs at an acceptable level of risk. Some EU countries use so-called test portfolios to show how effective it was to achieve debt management goals for the main goal. At the same time, information in annual debt reports is given in the general context and does not reveal the intricacies and details of the debt management strategy.

In the process of European integration of Ukraine, a balanced system of risk control in the debt area should be formed. The opportunities for obtaining long-term and cheap borrowing depend on the unification with the European reporting form, the monitoring system, the use of commonly accepted indicators of debt stability in the country, and the system for collecting and processing macroeconomic data.

It is expedient for Ukraine to improve the methods of implementing European integration plans in the new realities of international financial policy. The orientation of the national development strategy to the European civilization model indicates the need for a radical change in the established political and economic systems and the construction of a new economy as part of the global economic order [10].

Having analyzed the foreign experience, we consider it necessary to emphasize that the most effective assessment of debt policy is the application of the "target benchmark" method in assessing the effectiveness of debt policy. Its use through early redemption, hedging and securitization of debt stimulates a more active policy in borrowing and dealing with public debt.

In our opinion, in addition to these tasks, there is a need to improve the macro-financial policy through execution:

- in order to increase the demand for the Government's hryvnia loans, adjust the system of state borrowing instruments, in particular: the introduction of savings and floating interest rate bonds indexed at the level of inflation;
- to create conditions for preventing the unbalance of public finances during the period of strengthening external risks, keeping the deficit of the state budget of Ukraine at the level of up to 3% of GDP;
- in order to minimize the risks of financial destabilization under the influence of external shocks and to increase the capacity for anti-cyclical fiscal policy to maintain state and state-guaranteed debt within 40% of GDP;
- to support cooperation with the IMF in order to cover the financial gap between the budget and the balance of payments;
- to block the channels of uncontrolled increase of the state debt of Ukraine through improving the finances of NJSC Naftogaz of Ukraine and reducing the amount of its budget support;
- to create the basis for increasing the degree of controllability of debt processes and reduce the riskiness of contingent liabilities for the budget of the country through the development of effective tools for regulating external corporate borrowings and the introduction of an integrated analytical system for accounting for contingent liabilities of the state.

In order to achieve the tasks, there is a need to develop a medium-term debt strategy, use borrowings for development purposes, diagnose the structure of debt, focus on the domestic market and stimulate business activity, etc. In other words, there should be an integral system of statutory fixed regulatory costs for servicing and repayment of debt. Much attention, however, must be paid to the development and improvement of risk management, the ability of the state to fulfill its debt obligations.

Conclusions. Thus, in order to ensure an optimal level of security and solving problems in the Ukrainian financial system in general, and in relation to the government's internal indebtedness in particular, the following measures are necessary:

- raising the level of budgetary security requires ensuring compliance of the objectives of the fiscal policy with the financial capabilities of the state, strengthening

control over the effectiveness of the use of targeted budget funds, limiting the practice of constant budget adjustments in the budget execution process (both in terms of income and expenditure), ensuring transparency of the formation and implementation of the state and local budgets;

- the improvement of monetary policy requires the establishment of target rates of interest rates and the formation of a money supply program that meets the size of the demand for money; increase in the stability of the monetary unit; reduction of the share of the monetary aggregate M0 in the money supply of the country; lowering the dollarization rate of the economy; ensuring control over observance of the basic parameters of monetary policy principles for a certain year;

- Improving the efficiency of public debt management involves improving the legislative framework for the formation of internal and external debt; consistency with the strategy of economic development, forecast of GDP, balance of payments, reserves of the NBU; improvement of the processes of formation, accounting, servicing and control of state borrowing, the implementation of a coordinated policy of the relation between external and internal borrowing; developing a mechanism for monitoring compliance with the annual limit of external borrowings and the size of external public debt;

- raising the level of financial security of the stock market is associated with an increase in the level of capitalization of the financial system, the volume of trading in the stock market; volumes of financial services provision; a decrease in the share of problem assets in the total portfolio of assets of banks and other financial institutions;

- it is necessary to develop an infrastructure that will expand the opportunities for economic growth. Infrastructure development should take place in two directions: integration of the national economy into the global environment, as well as its development in the regions within the country. Creation of infrastructure should be subject to the law of profitability: it is necessary to build only where it will lead to the development of new enterprises and the creation of jobs;

- In order to stimulate the development of the insurance market, the principles of insurance supervision should be introduced in accordance with the standards of the International Association of Insurance Supervisors; create a system for guaranteeing insurance payments under life insurance contracts.

Guarantee of financial security of the state is the result of practical measures by the legislative and executive authorities in the financial sphere, which is achieved through the effective use of public finances, the creation of a favorable tax and investment climate, and the improvement of domestic legislation.

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CURRENT APPROACHES TO CLASSIFICATION AND UNDERSTANDING OF THE ESSENCE OF THE COMPETITIVENESS CONCEPT

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Annotation. *The theoretical approaches of scientists to the interpretation of the definition of "competitiveness" are analyzed. The diversity of scientific thought regarding competitiveness has served as a basis for the systematization of definitions that create a theoretical framework for the study of competitiveness as an economic category.*

Key words: *competitiveness, object of competitiveness, classification of the competitiveness types, social relations, economic category.*

The key task of the national economy management in Ukraine is to develop an effective mechanism of ensuring the concept of the national competitiveness. The full disclosure of the meaning and the essence of the competitiveness management presuppose, first of all, the definition of the categorical basis of the competitiveness concept as an object of management.

Competitiveness is the word that comes from the Latin language, meaning "competition and the struggle for achieving the best results". Therefore, the implementation of the competitiveness can be detected only in a market economy, an integral part of which is competition.

Arguably, the most famous interpretation of this concept was offered by Porter M., who understood competitiveness as the position of the commodity producer in the domestic and foreign markets determined by a combination of factors, reflected in the totality of indicators [15, p. 18].

Lifits I. notes that the terminology in the field of competitiveness is not unified. The basis for determining the concept is the object of assessing the competitiveness of products, organization, industry and country. According to these objects, competitiveness can be considered at four levels [9].

Sachs J., a well-known economist, regards competitiveness as a prerequisite and an instrument for sustainable economic development of the country. In his opinion, a healthy economy should be not only backed up by growth in business activity, but also governed by law and steadily operating markets [21].

When considering the understanding of the essence of competitiveness, offered by Aleksieiev S.B., it is important to mention that competitiveness is an economic category that allows, under competitive conditions, to present to the domestic and foreign markets goods that, from the point of view of competitive advantages, are perceived by the consumer as the best similar product of competitors. Besides, it allows the enterprise to receive planned revenue, to implement competitive strategies and to ensure survival and

desired market position in the long-term period of time [1, p. 618].

Pichugina T.S., Zabrods'ka L.D., Zabrod'ska H.I. distinguish three levels of the subjects of competitive rivalry, which are as follows: a micro level (products, enterprises); meso level (industries, corporate associations of enterprises and organizations of conglomerate level), macro level (national economic complexes). Moreover, these scientists consider it expedient to divide the system of competitive relations that arise in the sphere of economic processes into three organizational and managerial levels: a micro level (competitiveness of goods or services and enterprises); meso level (competitiveness of corporate associations of enterprises and industries); macro level (competitiveness of the national economy and international economic relations) [14].

A diversity of scientific thoughts about the categorical apparatus of competitiveness has served as the basis for systematizing the understanding of the essence of competitiveness, offered by leading economists in the following areas:

a) at the macro level competitiveness is considered to be as follows:

– an economic category that characterizes the state of social relations in the formation and implementation of economic policy to ensure appropriate conditions for a stable increase in the efficiency of national production, adapted to changes in the world situation and the growing demand of the population based on achieving better socioeconomic parameters than competitors' products. (Bazilyuk Ya.B.) [2];

– the potential or already realized ability of an economic entity to operate in a relevant external environment, which is based on the competitive advantages and reflects its position relative to competitors (Piddubnyi I., Piddubna L.) [13];

– a stable position of the country in the domestic and foreign markets, due to a complex of economic, social and political factors, as well as the ability of the subjects of competition to resist international competition in the domestic and external markets (Hubskyi B.V.) [3];

b) at the meso level competitiveness should be defined as:

– the ability to make a profit on the invested capital in the short-term period not lower than the set one, or as an excess over the average profit in the relevant business sphere (Zabelin P.V., Moisieiva M.K.) [5];

– the degree of the ability of the industries of the national economy in a fair market to produce goods and services that meet the requirements of both domestic and foreign markets while increasing the real incomes of wage earners (Kulikov H.)

c) at the micro level of competitiveness can be described as:

– the degree of attractiveness of this product for the consumer who is making a real purchase (Knysh M.I.) [6];

– a set of consumer properties of the goods that determines its difference from other similar goods in terms of the level of satisfaction of customers' needs and the costs of its acquisition and operation (Hroshev V.P.) [7];

– a characteristics which shows how effectively the enterprise meets customer needs compared to other business entities that offer such a product or service (Stevenson W.) [19];

– the real and potential possibility of enterprises in the context of the existing conditions not only to design, but also to manufacture and sell goods that are more attractive to the final consumers than the goods of the competitors (according to price and non-price characteristics) (Raizberh B.A., L.Sh. Lozovskyi, Ye.B. Starodubtseva) [16];

– a complex characteristics of enterprises, which is based on the analysis of various aspects of production and economic activities (production potential, labor, materials, financial results, etc.), and allows to determine the "strengths" of enterprises in competition, as well as to find the ways to achieve advantages over competitors (Marenych A., Astakhova I.) [11];

– the degree of attractiveness of a certain product for the consumer who is making a purchase (Yudanov A.Yu.) [20];

– the possibility of effective economic activity and its practical profitable implementation in a competitive market. This is an indicator that generalizes the viability of the enterprise, as well as its ability to effectively use the financial, production, scientific, technical and labor potential (Pertsovskyi N.I., Spyrydonov I.A., Barsukova S.V.) [12].

Competitiveness is a multifaceted scientific concept that must be considered in a single chain approach, i.e., at the following levels: "Production – Enterprise – Industry – Region – State" [14].

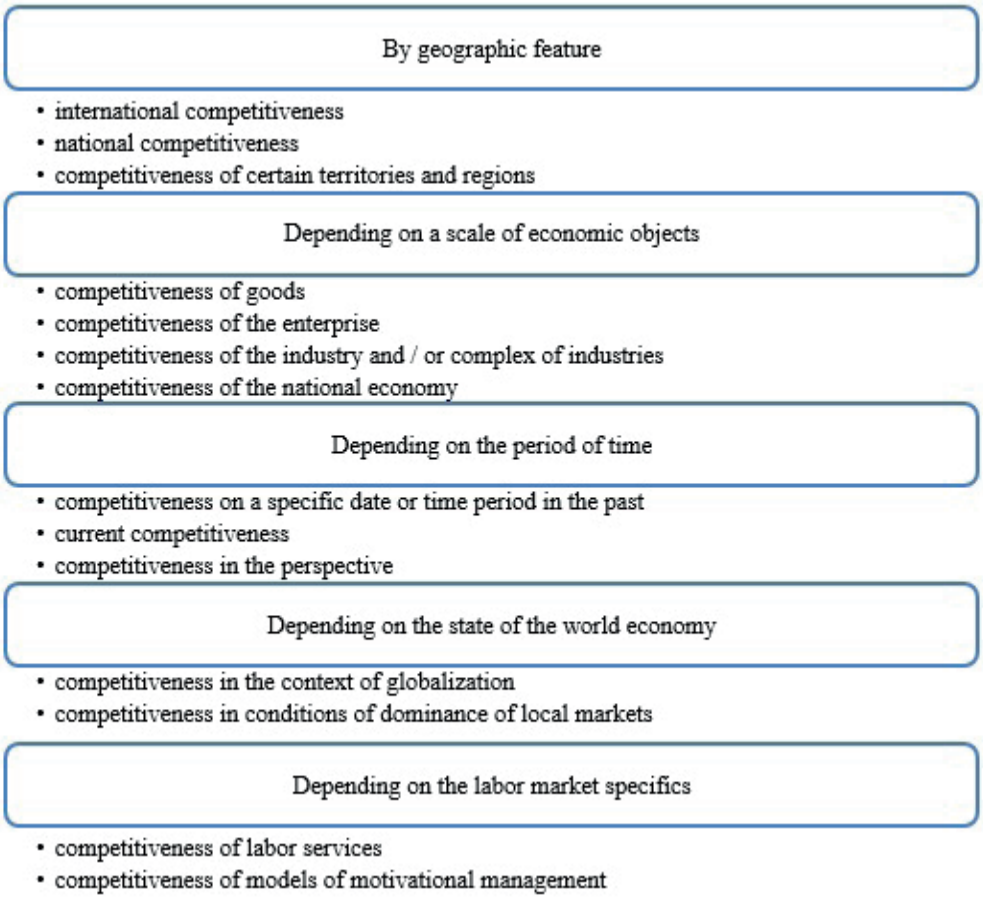
Thus, the types of competitiveness can be determined depending on the level and object of the analysis: at the macro level – the competitiveness of the state and its economy; at the meso level – the competitiveness of the industries of the national economy and regions; at the micro level – the competitiveness of the enterprise (firm) and its products. Ensuring competitiveness at the macro and meso levels is possible only if the level of competitiveness at the micro level is sufficient (i.e., at the level of the enterprises and the products that they produce), that is, the production and sale of competitive goods is an indispensable condition for the enterprise's competitiveness, and finally, the enterprise's competitiveness is the result of having competitive advantages in relation to the whole range of problems of managing its activities [14].

At the same time, it should be noted that when studying the importance of competitiveness as an economic category, scientists do not pay attention to the role of labor as the basis for creating a competitive product, enterprise, industry, region and the country as a whole.

Many experts in the field of globalistics argue that in the 21st century, competition will occur first for labor and then for sources of raw materials, including oil and gas, as well as for markets for goods and services produced. Considering the professional and educational level of the Ukrainian labor force, it should be determined as the most important competitive advantage of the country. The experience of economically developed countries and the countries that have made an economic breakthrough (in different periods of the 20th century: Japan, Korea, Germany, Ireland, Czech Republic, Hungary, Slovenia) testifies to the decisive importance of human capital, labor quality and motivation of the effective work. This new concept of competitiveness, oriented

towards the foundations of human development, replaced another concept, the driving force of which was the creation and implementation of new technologies, as well as the accumulation not so much of human as of material capital. Accordingly, the criteria of competitiveness changed: the advanced economies moved from the price criterion to the quality criterion, and it was the quality (of goods, services and resources) that began to determine the success of development as a whole [8].

The most generalized classification of competitiveness is shown in Figure 1. Therefore, in the context of labor migration, existing in the country, we propose to introduce one more criterion of classification, which we consider appropriate under current market conditions: the competitiveness of labor markets.



Generalized and supplemented by author on the basis of the source: [17]

Fig. 1. Classification of competitiveness types

We support the opinion of Semikina M.V., who adheres to the generalized point of view that labor is one of the leading economic resources or factors of production.

Consequently, the market sells labor as a specific commodity, which is offered by the owner of the labor force and is characterized by a combination of physical and mental abilities, professional qualities, knowledge and skills that will allow an employee to contract a certain amount of work (labor services) of a certain quality under a contract during the necessary period of time [18].

Unquestionably, some doubts exist as to the conformity of the quality of the Ukrainian labor force to world standards, and its ability to quickly integrate into world economic processes. In general, the thesis about Ukraine's attempt to integrate into the global economy contradicts the fact that about a million of our fellow citizens work for a long time in the developed countries of Europe. Strictly speaking, this is an indication that the population of Ukraine and its labor force have already been successfully integrated into the world, in particular the European economy [8].

Thus, our research of scientific sources allows us to conclude that competitiveness is a complex concept, which is interpreted depending on the object that is being considered. Along with the existing classifications, in modern market conditions it is considered appropriate to classify competitiveness taking into account competitiveness in the labor market, which should be studied on a par with the competitiveness of products, enterprises, industries, regions, and states.

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EUROPEAN STANDARDS OF ORGANIZATION OF LOCAL FINANCES: COMPARATIVE ANALYSIS

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Annotation.*The article describes the European standards for the organization of local finance. It was stated that the filling of the revenue part of local budgets serves as an important task of the economic policy of any state. The basis for the effective organization of local finance is the normatively regulated system of local taxation. Two main approaches to regionalization of taxation are revealed: "functional" and "optimization". The boundaries of described models are rather conditional and dynamic. Countries assigned to the "functional" model, tend to the expansion of local authorities powers with involvement into performance of functions previously considered as public. Countries implementing the "optimization" model tend to follow a tendency of reinforcement municipalism. The regionalization of local finance system is based on the paradigm of approaching of the subject of management to its object. At the same time, the "optimization" of organization of local finance approach cannot be fully perceived, given the extensive historical experience of local self-government (both positive and negative).*

Key words: *European standards, organization of local finances, local budget, state economic policy, local taxation, decentralization of power, local self-government, regionalization of taxation.*

Introduction. Serving as the main budget fund of local authorities, local budgets perform functions of redistribution of financial resources between subgroups within the general population, branches of economy at the level of administrative divisions. These budgets provide the aid to local self-governments in accumulation of financial resources aiming at solvation of complex social and economic objectives at the local level.

Effective organization of local finances has a direct impact onto the level of financially self-sufficient development of regions, determines the effectiveness of the influence of local self-government authorities on development of economic potential of administrative division.

The European experience of local self-government clearly demonstrates its belonging to the main factors determining the mechanism of functioning of "western system of economic welfare", an integral part of which is the organization of local finances. According to V.I. Kravchenko, the theoretical conception of local finance "reflects a special independent sphere of financial activity of communities, communes, societies, municipalities and other local self-government authorities, regions, territories that are subjects of federations or autonomous administrative divisions" [1, p. 5]. Thus, the researcher insists on the precedence of effective organization of local finances in activities of local self-government authorities, and, in fact, the concept of "local finances" emerged as a counterbalance to the government finances.

In this regard, the effective development of local self-government in European

countries, as well as social standard of living, are directly related to the optimal means and quality of organization of local finances.

State of research. Organization of local finances of public authorities acts as an important part of government budget system. They help to determine the effectiveness of funding of investment projects at the local level, the effectiveness of the functioning of local self-governments, etc. At various times, the theoretical foundations of organization of local finances have become the subject of research by T.T. Avdieieva [19], R. Ahrend [7], H. Blochliger[8], V.H. Bodrov [17], G.M. Bukenen [13], N.I. Vlasiuk [12], M.P. Voronov [3], M.A. Haponiuk [24], O.S. Horbatenko [22], L.K. Voronova [15], M.O. Yevdokimova [11], V.V. Zaichikova [6], A.A. Kovalenko [16], O.P. Kyrylenko [23], V.I. Kravchenko [1], P. Kraulikh [20], M.F. Lehkova [5], V.V. Mamonova [22], R.A. Masgrave [13], I.M. Pakhomov [2], P.S. Patsurkivskyi [10], K. Fredriksen [21], P. Shyianevych [9].

Emphasizing the considerable theoretical development of the problems of public finances organization at the local level and giving the preference to the significant contribution of above-mentioned experts to carrying out the research within the framework of the outlined issues, the unresolved issues should be emphasized as well. In particular, theoretical issues concerning characterization and clarification of the effectiveness of European standards within the process of organization of local finances require further research.

The purpose of the article is to analyze the principles of formation of local finances of public authorities, to characterize the content of European standards in this field and to provide scientifically substantiated propositions for improvement of organization of local finance in Ukraine considering and taking into account domestic and foreign research sources, current European legislation in the field of organization of local finances and its implementation practices.

Statement of principle provisions. An important objective of the economic policy of any country is the filling of the revenue part of local budgets. The level of effectiveness of the local budgets generation depends on the development of financial and economic institutions of the country, social and economic development of the regions and welfare of citizens.

I.M. Pakhomov also agrees that the local finance have a crucial impact during the organization of local self-government, he states that certain financial resources in the territory of administrative divisions are available and the right to dispose them as one of the main prerequisites for the stable development of market relations [2, p. 109].

Along with this, M.P. Voronov substantiates the need to study and compare European experience in organization of local finance with the limited resources available to some territories [3]. Above-mentioned statement indirectly emphasizes practical along with theoretical value of European experience in the field of organization of finance of local self-government authorities in the context of the introduction of decentralization of public authority in Ukraine.

All-pervading principles of organization of fiscal relations in modern European

practice are defined by the European Charter of Local Self-Government, which declares the right of local self-government authorities to freely dispose the reasonable own funds within the framework of national economic policy. The amount of financing of local self-government authorities should be consistent with the functions of local authorities as prescribed by the Constitution or the legislation [4].

According to the fair statement of M.F. Lehkova, the right to possess the own budget serves as the basis for the material powers of local self-government authorities [5, p. 68]. At the same time, the processes of organization of local finance in specific European countries may significantly differ from one another, which is largely due to the form of state structure of a particular country and peculiarities of the local taxation system.

In this context, V.V. Zaichykova emphasizes the complexity and versatility of the system of local self-government financing. According to the researcher, the internal relations of this system are stronger than the external ones, since its elements are closely linked with a common "local interest". Unfortunately, the researcher does not reveal the meaningful content of the common local interests of local self-governments in the field of organization of local finance, but the conclusion about the complexity and versatility of local finances of local self-government deserves support [6, p. 10].

The basis for the effective organization of local finance is the normatively regulated system of local taxation. Two main approaches exist in modern foreign science considering regionalization of taxation: "functional", which was developed much earlier, and "optimization" [7-12]. They have disagreements over some issues, namely: the optimal distribution of powers and revenues between the levels of governance of society, the most effective levels for financing of social expenditures of a certain nature and generation of income, the degree of government interference into the activities of local authorities and forms of control.

According to advocates of the functional approach, the government has the exclusive powers for the elaboration and implementation of economic policies, since it is responsible for macroeconomic stability and support of social standards. Researchers of this group, recognizing the effectiveness of concentration of the certain types of revenues at the local level, nevertheless tend to believe in the predominate competence of the state in terms of determining the criteria for allocating of budget funds, generated on the basis of social and political goals. Thus, R. Masgrave insists that the problem of the effectiveness of public goods provision cannot completely determine the delineation of responsibility between the levels of government [13, p. 18-21].

The "optimization" approach has become the subject-matter of research and development by American experts of econometric field.

For example, W. Oates is convinced of inability of central authorities to objectively assess the real needs of the community at the local level and determine the necessary level of its (community) financial expenditures [14, p. 113-118]. Hence, it is a logical assumption that targeting the actual level of demand makes possible abandoning of excessive services and saving budget funds and the costs of their mobilization.

W. Oates actually confirms the effectiveness of the differentiated approach to budget

allocation at the local level, when the level of social welfare is higher if effective levels of consumption are ensured in each territorial entity given the absence of cost savings from centralized provision of public goods.

Advocates of the “optimization” approach interpret local taxes as a payment for the cost of public services offered by the local self-government, specifying at the same time that considering the choice of place of residence or business organization, taxpayers usually depend, in fact, on the ratio of taxes and quality of services. That means, it is referred to the interest of local self-government authorities in improvement of the territorial community welfare, rather than in targeted expansion of the revenue part of the budget, which, according to L.K. Voronova, also acts as a part of the national income of the state and is used for fulfillment of objectives of local self-government in interest of community living on its territory [15, p. 129].

A tendency towards increased centralization of finance in European countries, which prevailed from the late XIX to the second half of the twentieth century, has now changed to the opposite. However, the ideology of this process appears as a compromise between “functional” and “optimization” approaches.

This conclusion is confirmed also by A.A. Kovalenko, at the same time specifying that in most European countries “a decentralization of public finances and endowment of local self-government with broad control powers are observed" [16, p. 13]. In addition, the statements of the researcher are only partially compatible with the approaches of European countries to resolving of fundamental issues of intergovernmental fiscal relations.

Researchers note the presence of two basic models of distribution of powers and resources. The first model, adopted in most Western European countries, defines the powers of the local self-government authorities as management of the territory and the provision of public services in areas of communication, hygiene, public transportation, communal property management, protection of public order, social security, culture and sports.

For example, a special type of local self-government, called Anglo-Saxon, has developed in Great Britain.

Researchers relate a number of features of local self-government to the principal features of the Anglo-Saxon model, including those that are related to the absence of local executive authorities (regional state administrations) and plenipotentiaries of the central government authority, whose appointed in order to execute the control over the activities of local self-government; expanded autonomy of local self-government; electivity; constant control by the community.

One of the defining characteristics of the Anglo-Saxon model is the absence of plenipotentiary of the central government authority, whose appointed in order to execute the control over the activities of local self-government. Municipalities perform as autonomous entities and exercise the power on behalf of the Parliament.

The following sources of revenue are used within the framework of this model during the organization of local finance:

1. Grants and subsidies directed by the central government authorities (about 40%). The most significant of these is the "supportive subsidy according to tax level". It is provided in the form of a target contribution, established in accordance with the financial capacity of each local self-government authority and predicted (as of preliminary estimation) expenditures. Thus, the total amount of transfers is determined as a result of the agreement between the central authorities, the parliament and local self-governments. Calculations of the number of beneficiaries, prepared by local self-government authorities, are then used for determination of the indicators of cash collateral for certain regulatory requirement. Final revise is performed at the end of the year, and if the number of declared beneficiaries exceeds the actual number by more than 5%, penalties are charged from the local self-government [17, p. 49].

The procedure for expenditure of these funds is annually discussed between the central government and the associations of local authorities. In addition, grants-in-aid are provided for housing constructions, provision of police, transport and capital expenditures.

2. Local fiscal charges as nonagricultural land fees and real estate tax (about 30%).

3. Other income: rental housing, payment for services rendered by local self-government authorities (about 30%).

Thus, the revenue part of the local budget in England, mainly consists of the unsustainable property taxes. The authorities correlate their amount, which in turn is perceived by the local communities as a restriction of the freedom of local self-government.

At the same time, local self-government has the right to establish own taxes and fully controls its finances. In this regard, the subject on local taxes change is one of the most significant in the political life of Great Britain.

Thus, upon the implementation of this model, local authorities provide the above-mentioned powers of territory management, as well as a significant part of state functions: social insurance, social institutions, education and health care. It is considerably assumed that the Anglo-Saxon model has spread into Scandinavian countries, Great Britain, the Netherlands, Poland and Hungary, although it has significant peculiarities in Eastern European countries.

Despite the fact that Great Britain did not introduce any radical reforms of local self-government for many decades, during recent years the efficiency and legitimacy of local self-government managed to increase, however attempts to increase local budget revenues have failed.

The solution of the mentioned problem is seen in the redirection of number of powers from the local self-governments to the central government authorities, in particular those related to the implementation of health care, some aspects of police activities, issues on water and land use.

In particular, currently state transfers are directed to cover the difference between the estimated expenditures and revenues from local financial sources, however the mechanism for equalization of fiscal capacity is not a priority, own revenues of local

budgets are of the major importance.

Another, no less effective model of organization of local finance, is German.

The German Constitution adopts a unified approach to living conditions for all citizens (basic living standards are set for the entire population of the country at the highest legislative level), as well as the basic principles of organization of local finance (state finance).

Considering that the functions of the state in organization of local finances have a pronounced vertical structure, the legislature of the country embodies the powers regarding the redistribution of financial resources, the formulation of the development strategy of the country, etc. Accordingly, the local federal authorities perform functions that are transferred from the central level and are financed from the federal budget.

At the same time, subsidizing measures in housing conditions improvement refers to those functions that are transferred to the lowest level without providing financial assistance from above.

Income tax and value added tax are referred to taxes that are distributed between the center and local self-government authorities, meanwhile taxes on gas, tobacco, coffee, insurance, and also the fees and excise on alcoholic beverages are completely the state's monopoly.

In addition, taxes on land, property, heritage, automobiles, lotteries, beer, as well as local ("minor") taxes on consumption and industrial taxes are fully transferred to the local level.

One of the central problems in the organization of municipal finance in Germany is the distribution of turnover taxes: the shares that are accounted for the federation and states are reviewed annually and are stated in a special law. Labile distribution proportions ensure adaptation of the revenue part of the budget to constantly changing objectives (and, consequently, expenditures) of different levels of authorities.

During recent years, the proportional share of federal taxation exceeds the proportion of states sometimes in the ratio of 54:46, and sometimes - 50.5: 49.5 [18].

Federal legislation provides the possibility for local self-governments to receive additional allocations (transfers) in case of a deficit of tax proceeds, utilizing these funds at their own discretion [19].

Special legal remedies from the federal budget are also foreseen in the event when certain activities of the center provide financial problems (for example, construction of military communities, placement of federal agencies).

According to researchers, the stated model envisages, as the main mean of financing of local budget expenditures, the proceeds from the share of national taxes conferred to them, as well as transfers from higher-level budgets. Local taxation within the stated model of organization of local finances is not particularly important [20, p. 31-33].

An overriding concern is the financial equalization. In accordance with the principle of equalization, every citizen, regardless of the place of residence, has the right to at least a standard level of services rendered by public authorities. The core issue of the equalization is the transfer of financial resources between the territorial communities in

order to provide more equal distribution of those resources.

At the same time, a wider range of the expenditure powers also requires a greater revenue base. According to K. Fredriksen, financing according to the German model is predominantly oriented onto own tax sources of revenue of municipal budgets. Local authorities have the plenary powers, however, provided that their activities directly concern public interests [21].

In terms of securing public functions, the powers are strictly regulated and continuously monitored. A distinctive feature of the German organization of local self-government is the control system, which, in addition to the relevant ministries and departments, includes the institution of financial ombudsmen.

A similar system of organization of local taxes, although with a greater degree of centralization, is observed in the French Republic.

Considering the French model of the organization of municipal finances, it should be noted that it is more symmetrical than German, which is associated with a rather high degree of centralization of power.

This is reflected in the system of administrative control of the central government over local authorities, the hierarchical subordination of local authorities to the central. Control is performed via specially appointed representatives or in other forms.

In this regard, the possible sources of replenishment of local finance are clearly identified within the state of France, which include: a) revenue from property owned by the community; b) extra proceeds, which are the amounts the community receives in the form of a percentage subcharges to state direct taxes.

One of the current key problems in the organization of local finance in France is the prevalence of municipal expenditures over income. The provided solution is, by the analogy with the Federal Republic of Germany, utilization of subsidies from the central government as a source of coverage of the current expenditures.

At the same time, the boundaries of the above-mentioned models are rather conditional and dynamic. Thus, countries applying the first model tend to the expansion of local authorities powers with their involvement into performance of functions previously considered as public. Though countries implementing the second model tend to follow a tendency of reinforcement of local autonomy.

The idea of decentralization of power, including financial, was implemented by many European countries from the beginning of 2000s. In actual practice it was manifested as an increase of the proportion of local taxes and fees in the structure of tax revenues of local budgets by most European countries. For example, local taxes represent the total amount of local budget revenues in Austria – 72%, the United States – 66%, Sweden – 61%, Japan – 55%, Denmark – 51%, France – 48%, Switzerland and Germany – 46%, Norway – 43%, Great Britain – 37%, Finland – 34%, Spain – 31% [22, p. 3].

Some experts also discuss the positive effects of world economic integration, which involve elimination of financial flows upwards [23, p. 41].

The regionalization of local finance system is based on the paradigm of approaching of the subject of management to its object. At the same time, the “optimization” of

organization of local finance approach cannot be fully perceived, given the extensive historical experience of local self-government (both positive and negative).

But the research community is increasingly inclining to the fact that self-financing is not a problem of autarky, but serve as a sustainable incentive for the development of local self-government.

Therefore, there is no doubt that the process of liberalization of economic activity and increase of the financial autonomy of local authorities is the basis of the successful development of the organization of local finance [24, p. 191].

Conclusions. Consequently, European countries implement quite effective models and mechanisms of organization of local finance that have both general and specific peculiarities.

General provisions are the conceptual framework and the underlying principles of this process.

Thus, municipal finances, as a rule, are considered as the set of social and economic relations arising from the formation, distribution and utilization of financial resources for problem solving of local importance.

The above-mentioned relations are formed between local self-governments and the community – residents of a certain territorial entity, as well as business entities.

Hence, the structure of local finance is developed from the following components: a) municipal funds; b) municipal extra-budgetary funds; c) state and local securities belonging to the local self-government authorities; d) other funds held by local self-governments.

At the same time, the analyzed models have their own peculiarities. For example, in the UK, the local finances are generated at the expense of local taxes, lease payments, which amount more than 60%, as well as due to a significant part of subsidies from the central budget. In Germany, the majority of expenditures is covered by financial transfers and grants from federal and regional budgets, and only 25% of revenues are from local taxes paid by the local community.

It should be noted, that the Ukrainian system of organization of local finance in general is congruent with the similar European standards, however has its own peculiarities.

In particular, there are negative accomplishments along with undoubted positive in the direction of organization of local finances.

Significant expansion of the revenue base of local budgets through the consolidation of new types of revenues should be mentioned as a positive tendency towards the introduction of decentralization of power and the transfer of ancillary powers from the center to the regions. Thus, according to the National Audit Office, the total amount of revenue of the local budgets has increased from UAH 232 billion in 2014 to UAH 502 billion in 2017 [25].

The following was introduced as new types of inflow: a) provision of the local budgets with educational and medical subventions, which amount exceeds UAH 50 billion each; b) establishment of a new system of equalization of local budget revenues

by the corporate income tax and the personal income tax; c) transition to the direct intergovernmental fiscal relations with the government budget; d) expansion of the expenditure powers of local self-government authorities.

In addition, the national system of organization of local finances also has some disadvantages. For example, currently there is some imbalance in the system of grants and subsidies within the organization of intergovernmental fiscal relations, which is due to the differentiation of functional and corresponding expenditure powers between public authorities and local self-government authorities.

Negative consequences of such situation are manifested in the untimely approval of certain transfers, as well as the order and terms of their utilization; unpredictable adoption of new subsidies in the Government Budget of Ukraine during the current year; reorientation of directions and types of transfers; numerous redistribution of expenditures between the government and local budgets.

Consequently, the introduction of decentralization processes has still not fundamentally influenced the increase of autonomy of local self-government authorities in Ukraine, did not ensure to the full extend their financial sovereignty and responsibility for the inefficient utilization of transfers from the government budget, did not improve the quality of the provision of public services to the community to the expected extent [25].

Improving the efficiency of the organization of local finance is appear in the further increase of financial sovereignty of local self-government, which envisages the further increase of the local budgets revenue of local self-governments in order to finance their own expenditures upon the exercise of powers. At the same time, it is necessary to review and accurately structure the list of delegated powers implemented by local self-governments. The extend of delegated powers should be clear and limited, so in order to implement them the state should provide targeted transfers from the government budget. Such a system will increase the efficiency of the implementation of delegated functions.

The local tax structure requires optimization, which should reflect a transparent and equitable distribution of taxation at the local level. The tax system glut at the local level by significant administrative and governing expenditures leads to its unprofitability.

In addition, in order to harmonize the tax legislation, a generalized unified mechanism for determination and collection of local taxes requires adoption.

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TRANSFORMATION OF THE HIGHER EDUCATION BY DIVERSIFICATION OF SOURCES AND FORMS OF ITS FINANCING

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Annotation. *The article defines the directions of transformation of the system of financing higher education in accordance with the demands of the present. The emphasis was placed on the expediency of using alternative, modern sources of funding for the education system, which justifies the need to diversify the funding sources of universities as a necessary factor that affects the quality of the training of specialists and the development of the country as a whole.*

Key words: *financing of higher education, diversification of sources of financing of universities, quality of training of specialists.*

The 21st century is characterized by the emergence of a knowledge economy, which greatly enhances the role of education and science not only in the public but also in economic life. Knowledge, turning into a resource displayed in the form of employee competencies, or a product that serves as an innovation, intellectual capital competes with financial and material assets. The needs for reforming the national system of higher education, which serves as an institutional and economic platform for the development of intellectual resources, are limited in scope of financing. Public funding often provides "simple reproduction" of education, which allows maintaining existing trends and trends in scientific and educational processes. Therefore, the search for new forms and additional sources of funding for higher education institutions is urgent taking into account the processes of globalization of the educational space.

Presenting main material. Over the past 10-15 years, globalization has greatly increased the impact on the transformation of national systems of higher education. Thus, according to one of the well-known university education theorists, vice chancellor of Kensington University P. Scott, globalization is the most fundamental challenge faced by a high school over a thousand-year history of existence [7, p. 3].

The decisive trend in the development of the global education system is the constant rapid growth of educational budgets over the past 15 years. The total volume of the world market for educational services in 2012 amounted to more than 4.4 trillion dollars (almost three times more than the total military budget of all countries of the world), while in 2000 - 2.3 trillion dollars. According to the forecasts of specialists, which presuppose the preservation and even increase of high current growth rates of the world educational market, in 2017 its volume will exceed 6.3 trillion dollars, while the largest volumes of financing growth will come to the higher education and public and corporate education during the lifetime [9].

The key feature of the development of society is the creation of a new model of the economy - the knowledge economy, under this condition education becomes one of the key factors of economic growth and sustainable development of the state. According to experts from the World Bank, one of the four main conditions for the formation of the knowledge economy is education and training that characterizes the availability of an educated and professionally trained population capable of producing, distributing and using knowledge.

Consequently, the problems of the educational system are exacerbated by the impact of globalization and the intensification of economic, international, scientific and technical, educational and cultural relations; rapid development and intensive dissemination of computer technology and information technologies; the increasingly pronounced orientation of social production to man, to meet its rapidly changing needs, aspirations and interests; displacement of the problems of resource supply of business structures in the sphere of awareness and recognition of the decisive role of the human factor in ensuring the proper efficiency of production and management [4, p. 13].

Universities are the main generators, drives and distributors of knowledge, information, experience and cultural wealth and today they become the key public institution in modern conditions. Evidence of their significant role in the modern social progress is, in particular, confirmed by western scholars of the existence of close interconnectivity between the development of universities and the economic growth of countries. It is no coincidence that those countries that recognized the priority of the development of university education were able to move on to the development of an innovative economy, which for a long time provided them with high competitive positions in world markets.

But all the components of the transformation of higher education in Ukraine face a range of problems, as concrete as economic ones, and general civilizations. First of all, it is the growing internationalization of educational activities. The emergence of international forms of organization and financing of education, increasing the need to address the problems of standardization of education, determine the need to ensure and improve the quality of educational services in the face of growing openness of the economies of countries, the increasingly free movement of people, capital and goods between countries. Consequently, global competition intensifies, which is why the national educational system of any country should be oriented not only to train qualified personnel for the development of its economy, but to train personnel who, along with this important goal, will also ensure the competitiveness of its economy in today's global environments.

The second problem is due to the fact that the decisive role of education in social development and the formation of the knowledge economy requires a powerful diversified mechanism for its functioning and financial support. In Ukraine, during the transformation period, there are diversification processes: and in relation to sources of funding (along with public resources, private, corporate funds, external resources are involved) and in relation to the forms of organization of educational activities, content

and technologies of the educational process. At the same time, the experience of the advanced countries of the world proves that economic mechanisms can be more effective, effective, aimed at concrete results.

In order to solve the problems that today is facing the system of higher education of Ukraine in particular, a substantial increase in the financing of education will be required. This will ensure the dynamic development of the educational sector, stimulate the processes of commercialization of knowledge, promote the growth of market positions of state universities, increase their competitiveness, because only with the availability of reliable and stable sources of funding, education will fulfill its mission of developing the human potential of the country.

The structure of funding sources on higher education varies widely among countries and was not unambiguous in its historical development. In the last decade of the 20th century, the tendency of diversification of funding sources on education became widespread in all countries. Thus, the main funding sources for higher education in Ukraine are the state budget funds, tuition fees for individuals and legal entities, grants from private, national, and regional funds of entrepreneurial structures in the field of innovation (Table 1).

Table 1

Gross Domestic Product and Consolidated Budget Expendıtures on education in 2007-2016 [12]

Indexes	2007	2009	2010*	2011*	2012*	2013*	2014*	2016*
GDP by production method, mln UAH	720731	913345	1079346	1299991	1404669	1465198	1586915	1979458
incl. education, mln UAH	33194	49239	53462	59377	71771	77986	76068	83285
- share on education in GDP,%	4.61	5.39	4.95	4.57	5.11	5.32	4.79	4.21
Total expenditures in the consolidated budget, mln UAH	226054.4	307399.4	377842.8	416853.6	492454.7	505843.8	523004.8	433159.8
incl. on education, mln UAH,	44333.6	66773.6	79826.0	86253.6	101560.9	105538.7	100105.6	75907.0
incl. for higher education, mln UAH	12827.8	20966.3	24998.4	26619.6	29335.9	30003.1	28340.5	21059.8
share of expenditures in the consolidated budget: - on education,%	19.61	21.72	21.13	20.69	20.62	20.86	19.14	17.52
- on higher education,%	5.67	6.82	6.62	6.39	5.96	5.93	5.42	4.86

* - excluding the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the zone of anti-terrorist operation (calculated by the authors).

The structure of the funding sources can be divided into the state budget (up to 60%), local and sectoral budgets (2%) and funds of individuals and legal entities (up to 40%). Speaking about the ratio of the proportion for universities of different ownership forms in Ukraine, it should be noted that initially there was an increase in the proportion of higher educational institutions with private ownership - up to 22.25% (maximum) at the beginning of the 2008/2009 school year. This indicator is slowly decreasing. As of 2015/16, the share of state and municipal higher education institutions is 79.67%, private - 20.33%.

The analysis of the tendencies of financing higher education in the EU makes it possible to state that the EU countries use different financing strategies for higher education, but do not have a universal mechanism for this. The funding of higher education institutions depends on both the quantitative (number of students) and the qualitative (number of credits, diplomas issued) indicators. There is a tendency to allocate public funds to higher educational institutions based on learning outcomes, as well as the tendency to combine different funding instruments.

Today, a significant amount of funding on the higher education system is based on market mechanisms: state resources are directed for the support of students rather than transferred directly to universities, as it is happening now in almost all countries of the world. In modern conditions, more and more countries are introducing a new type of financing for higher education - student loans. Recently, a rapid increase in the number of students became an overwhelming burden for the budgets of those countries where higher education in public universities was traditionally free or cheap. More and more countries begin to decrease budget funding. Providing educational credits, along with studying at their own expense, should prevent the transformation of higher education into the exclusive privilege of the rich sector in society. However, world experience suggests that such a way does not always give the desired results [2, c.132].

Although no country fully applies this type of financing, different tools may be used in the implementation of this approach:

• scholarships and grants. Most countries and universities offer financial assistance that does not need to be reimbursed, based on needs or scholarships for educational achievements;

• student loans. Student credits (loans) exist in different forms more than in 60 countries. A large number of HEIs arranges and finances student loans;

• Human capital contracts are offered by private firms and differ from student loans. The Student Participant agrees to repay a part of his/her income to investors who have a share of the student equity capital after graduation. Human capital contracts exist on a pilot basis in Chile, Colombia, Germany and the United States;

• vouchers. Among the six countries in the world, Bulgaria and Hungary have introduced the form of vouchers in higher education. Students receive the right to study at universities of their choice;

• Education savings accounts. Savings accounts on education (sometimes called "Individual Learning Accounts"), aimed at encouraging families or individuals to save

on higher education. The state (in Belgium (Flanders), the Netherlands, Spain, Sweden, Scotland and Wales) encourages families to put money on their children's savings accounts, offering either tax benefits or donations, such accounts are used for professional training purposes, employees and employers are encouraged to open accounts and use money for their further education [4].

Along with the above-mentioned tools (state financing of higher education institutions and elements of market allocation of funds individually for the benefit of students), a new system of financing higher education is being developed, which is reflected in the introduction of a multi-stage and multimodal system for attracting finance, including through the provision of additional educational services in higher education institutions.

Higher education leads to an increase in labor productivity, which should manifest itself in the growth of individual employee income. The higher is the level of education of all employed, the higher is the potential for growth in labor productivity in the national economy and the greater is the aggregate income of society. However, in a modern information society, one cannot learn once and for all life. Therefore, the most important skill for a modern person is the learning agility - the ability to learn, to forget unnecessary, to acquire difficult-related new knowledge quickly and to embed in the structure of personal experience. At the state level, the mass distribution of education is seen as a guarantee of its international competitiveness in the new global economy.

Over the last decade, the business environment changed considerably. As a result, the requirements for skills and abilities of employees, their education and professional experience change. There are professions that were unknown at all ten years ago, and in a few years, the labor market would again dictate its new demands, create new roles and seek for experienced professionals.

Therefore, state policy in the field of higher education development should be aimed at achieving its current world level, which is reflected in the introduction of a multi-stage and multidimensional system of higher education, the provision of additional educational services by higher educational institutions, in particular, within the framework of implementing the concept of life-long education; state funding is not the main form of providing retraining for employees or training in the training program for labor force throughout the working life.

Employers are the source of funds for the implementation and dissemination of lifelong education and continuing training of the workforce. Thus, the world's leading universities are private, they create trust funds - endowments, which accumulate donations from sponsors and patrons, invest profitable and use profits according to their academic needs. In the fierce struggle for sponsorship, Western universities defend their reputation, improve educational programs, and build profitable partnerships with businesses. the prevalence of an entrant abroad fully justifies itself: universities decide on themselves what specialties are demand and purposefully use sponsorship money. As a rule, the main part of contributions from endowment funds is one-time donations from individuals or corporations: a philanthropist can create a separate fund for financing a particular direction, program or scholarship. For this, the leadership of the university

provides the patron with honorary status or post in universities after retirement.

There are also annual "fundraising campaigns" when each university is competing for its sponsor - this is where the image, reputation and business relationships of an educational institution play an important role. In addition to the direct contributions of individuals, a significant part of the proceeds of the entangements is made up of funds transferred under the will, with the share of these assets in private universities reaches 50%. Unlike private universities, state universities have endowments, although they accumulate significant amounts, but are not the main source of income.

Thus, the country needs to create the necessary socio-economic conditions for more efficient use of budget funds. It is unlikely that the budget funds will cover all the prospective directions of development of the system of higher education. The state must fulfill all the conditions for legislative improvement and facilitate the implementation of the use of alternative sources of funding for these areas, on which the future economic development depends. The developed countries of Europe currently offer many educational programs that promote the development of not only all parts of national education and training systems, but also the development of national business structures. Therefore, the special significance in our time, the significant need for additional funds for the improvement of the educational system is cooperation with enterprises - potential employers and international funds, foreign higher educational institutions.

The most striking example of business collaboration and universities is the collaboration between Siemens and Lincoln University (UK) and Transylvanian University (Romania). For more productive and effective interaction, the corporation has located its headquarters directly on the basis of university campuses, which allows them to adapt students to the real needs of production, to involve the company's experts in teaching, to hold contests, to select scholars, to provide advisory services, to join the joint work with academy in R & D. At the initiative of Siemens, the Master of Science at Lincoln University has been complemented by a new program on renewable energy sources (MSc Energy Renewables and Power), and the University of 2015, as a result of the collaboration, has been recognized as a Global Lead Partner. Such cooperation greatly improves the quality of educational services, ensures the competitiveness of universities, promotes the mobility of students and teachers in the educational space, which already provides the country's economy with new high-quality specialists with knowledge and training at the world level.

Consequently, the tasks of transforming the system of higher education in the modern conditions are as follows: the training of specialists taking into account the requirements of employers and the needs of the labor market and economy; realization of measures aimed at introduction of programs of retraining specialists, in particular directly at enterprises (by means of intensifying cooperation between higher educational institutions and employers); with the assistance of the state and with the help of various funds, the expansion of the network of retraining centers at universities.

Therefore, it is advisable to involve employers more actively in the scientific and educational process, which will allow to optimize the system of preparation of specialists

in higher education in demand in the national economy and to bring education programs closer to the needs of the real economy sector, to take into account the European experience of planning the training of higher educational institutions of the diploma specialists for the economy as a whole, developed in the developed countries, innovative research universities, to ensure the priorities of educational policy in international science technical cooperation, as well as provide a new impetus for the active participation of entrepreneurship in the development of higher education.

Government regulation measures should focus on creating a multi-channel financing system based on the expansion of the list of extrabudgetary sources, including the attraction of charity funds, which could be a promising direction for financing higher education institutions and a significant increase in investment for the provision of the scientific and educational process. Considering that the structure of investment in the field of higher education of Ukraine can be considered ineffective, at the national level it is proposed to develop measures to stimulate business structures to increase investment in the process of training specialists for specific industries and conducting research work, by optimizing the structure of costs of business -structures and acceleration of cash flow.

Conclusions. Globalization has become an effective factor in the development of civilization, economics and education. In a globalized environment, innovation and the development of the competitiveness of the economy can only be sustained if there is a high quality education system and a high quality of human capital. The overcoming of artificial obstacles and the destruction of autarkic systems in the information society is just a matter of time. Higher education can no longer be limited to the training of specialists for a local or national labor market. In fact, for the students, the whole world is open, and therefore the need to ensure their competitiveness is becoming a strategic task for all universities.

The current state of national higher education allows us to recognize the fact that the existing system of financing higher education institutions does not ensure its development. The effectiveness of the system of higher education is closely linked with the harmonization of relations between all its stakeholders, which in turn can ensure its effective financing. Reorienting on a high-tech path for further progress, the state should focus exclusively on human capital, rather than on natural, infrastructural or industrial resources, to include competitive science and advanced education among the main engines of its economy.

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INTEGRAL ASSESSMENT OF ECONOMIC SAFETY OF THE INSURANCE MARKET OF UKRAINE

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Annotation. *The level of economic safety of the insurance market of Ukraine is defined on the basis of the integrated assessment methodology. It was found out that the low level of the integral index is conditioned by the influence of destabilizing factors which get the form of real threats. The formation of a system for managing the economic safety of insurance companies as a guarantee of the activation of the insurance market and minimization of insurance risks is suggested.*

Key words: *insurance market, economic safety, integral index of economic safety of the insurance market*

Problem definition and its relevance. For over the past decades, the role of insurance has steadily increased as an instrument of guaranteeing and stabilizing the financial system, whereas insurance companies are among the largest investment institutions in the world, and the financial resources accumulated in the form of insurance reserves serve as a significant source of investment into the economy. In developed countries the volumes of investments by insurance companies exceed investment volumes of generally recognized institutional investors - banks and investment funds. The positions of insurance companies on the financial market are constantly increasing due to the expansion of the range of insurance services, improvement in quality of customer service, the implementation of integrated financial products, etc.

At the same time, due to the levers of the insurance market, the redistribution of risks of economic entities is carried out, thus guaranteeing the provision of a continuous process of social reproduction. Insurance is a peculiar economic mechanism that neutralizes the negative influence of destabilizing factors and ensures the stability of the national economy to internal and external influences.

Presentation of the main research material. The domestic insurance market is characterized by excessive dependence of national insurance branches on foreign capital, increased conflicts and unfair competition, a high degree of concentration of financial resources on international insurance markets and integration in the field of reinsurance. Among the internal destructive factors, it is worth noting insufficient solvency and quite often inadequate economic policies of insurance companies, which lead to a decrease in their financial reliability. Among the main external threats one can find: the failure of supervisors to control the crisis trends in the financial market, high dependence on external reinsurance, imperfect domestic insurance legislation, the spread of insurance fraud at both the national and international levels, shadowing and criminalization of the economy, a sharp change in the exchange rate and the instability of the national currency

raate, the unfair actions of competitors on the financial market, crisis processes in the real sector of the national economy.

It is necessary to improve the legal and regulatory framework for supervision and control over the activities of insurers, to take measures aimed at increasing the level of protection of consumer interests in insurance services and the competitiveness of the national insurance market in order to strengthen the financial stability of domestic insurance companies and the financial foundations of the national insurance system.

Awareness of the importance of the Ukrainian insurance market for strengthening the economic safety of the national economy will raise the issue of calculating the integral index of economic safety of the Ukrainian insurance market. Taking into account the approved by the Ministry of Economic Development and Trade Methodological recommendations for calculating the level of economic safety of Ukraine, as well as the previous Methodology for calculating the level of economic safety in Ukraine and the scientific achievements of leading scientists in the field of economic safety [1; 2; 3; 4], one can calculate the level of economic safety of the insurance market by such an algorithm (see Fig. 1).

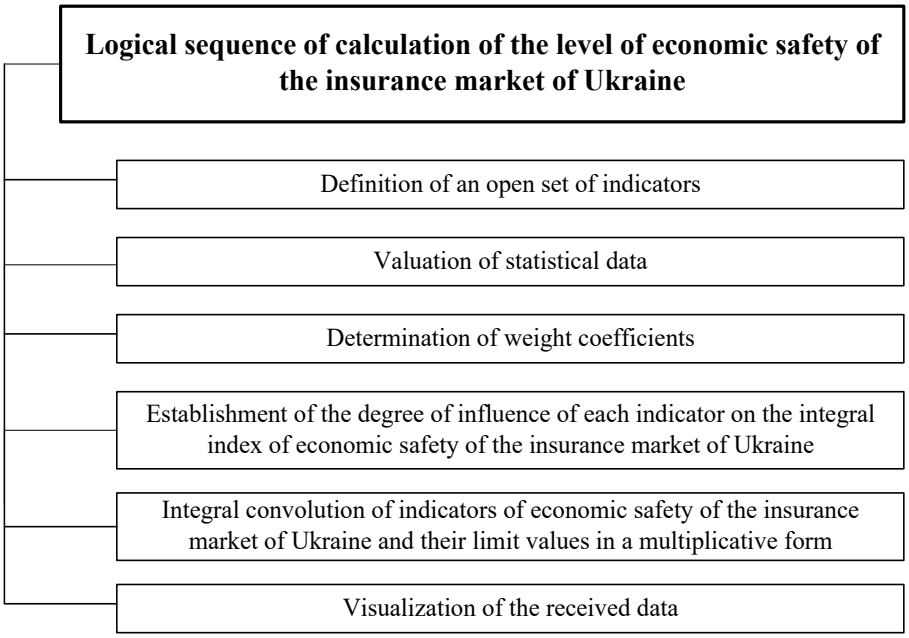

Fig. 1. Logical sequence of calculation of the level of economic safety of the insurance market of Ukraine

Output data for further calculations is presented in the table 1, where seven main indicators, which will determine the integral index of economic safety of the insurance market of Ukraine are shown.

Table 1

Indicators of economic safety of the insurance market of Ukraine

Year	The share of insurance in GDP,% (C)	Indicator of "insurance density" (insurance premiums per person), USD USA (C)	Gross Payments,% (C)	The share of long-term insurance in the total amount of insurance premiums collected,% (C)	Percentage of premiums belonging to reinsurers-non-residents,% (D)	Share of total authorized capital of insurance companies belonging to non-residents in their total volume,% (C)	The share of risks transferred to reinsurance,% (D)
2011	1,70	62,80	21,40	5,93	4,30	31,90	26,00
2012	1,60	62,10	23,90	8,41	5,20	26,10	11,70
2013	2,00	58,90	16,20	8,64	6,00	29,00	30,50
2014	1,70	78,70	18,90	8,07	5,70	32,20	36,30
2015	1,50	62,40	27,20	7,35	5,70	31,10	33,30
2016	1,50	69,30	25,10	7,84	8,50	30,50	36,00
2017	1,50	58,30	24,30	6,71	11,30	30,00	42,20

Note: (C) – indicators-stimulants, (D) – indicators-disintegrators

Source: calculated for [5]

Thus, the share of insurance in GDP in 2011-2017 fluctuated at the level of 1.5–2.0%, with the lowest value recorded in the last three years – 1.5%, which is significantly lower than the recommended value of 8–12%. According to this indicator, the level of economic safety of the insurance market of Ukraine can be considered unsatisfactory.

In accordance with international and Ukrainian standards, the insurance market of Ukraine remains weakly developed, despite the positive dynamics of growth in gross insurance premiums. Thus, the volume of insurance premiums per person in Ukraine in 2017 amounted to 58.3 USD, being below the minimum norm set, and being much lower than in developed countries. For example, the corresponding indicator in Germany in 2011 was 2,24 thousand dollars, in France – 3,52 thousand dollars, in Italy – 1,78 thousand dollars, in Spain – 1,5 thousand dollars, in the USA – 3,06 thousand dollars [5].

The indicator of the level of gross payments under the concluded insurance contracts has unstable dynamics and for the analyzed period did not reach the line - not less than 30%. The slow-moving dynamics during 2012-2014 was changed by a sharp surge in 2015 to a level of 27.2%, which in our opinion was caused by general macroeconomic recovery, but the decline of this indicator in 2016-2017 signals the aggravation of destabilizing economic factors.

Concerning long-term insurance in Ukraine one can notice that unlike risky types of insurance the development of this type of insurance is relatively slow. Thus, the share of life insurance in the total amount of insurance premiums collected during the analyzed period balances at the limit of 6–8.6%, which is almost five times less than the recommended mark, namely, at least 30%. This situation is a result of the low social

development level, the distrust of the population towards insurance companies and the negative experience of the post-Soviet period.

The indicator characterizing the share of premiums belonging to reinsurers-non-residents in 2011-2017 shows a positive dynamics. The smallest value of this indicator was in 2011 – 4.3%, and in 2017 this indicator increased to 11.3%. That is why the level of economic safety of the Ukrainian insurance market can be considered rather high according to this indicator.

The indicator characterizing the share of the total authorized capital of insurance companies belonging to non-residents in their total volume is somewhat higher than the established normative value and ranges from 31.9% (in 2011) to 30.5% (in 2016), indicating the low level of economic safety according to this indicator.

The share of risks transferred to reinsurance is increasing from year to year, characterizing the domestic insurance market as volatile and so dependent on powerful foreign reinsurers. It should be emphasized that due to the levers of the insurance market, the redistribution of risks of economic entities is carried out, guaranteeing the provision of a continuous process of social reproduction.

Thus, the analysis and evaluation of the main indicators characterizing the development of the domestic insurance market showed that the level of economic safety of the Ukrainian insurance market is low and, as a result, is vulnerable to internal and external threats.

One of the drawbacks of the current methodology is that it takes into account only the financial indicators of the development of the insurance services market and completely neglects the legal, informational, personnel and other indicators for assessing the state of the economic safety of insurance companies, and their activities directly affect the functioning of the insurance services market and the state of its economic safety.

The next stage of the algorithm for calculating the integral index of economic safety of the Ukrainian insurance market involves the process of valuation of indicators, that is, the transition to a scale of measurement in which the values of the indicators become proportional. It is worth noting that the direction of the impact of each indicator on the level of economic safety of the insurance market will be determined by identifying each indicator with respect to its direct or reverse impact on the integral index value.

In the case of direct dependence or unidirectional influence of growth of values of factor indicators on increasing the level of economic safety of the insurance market, such indicators are called indicators-stimulators. If the growth of the actual values of some indicators reduces the level of safety, they are called indicators-disintegrators.

For indicator-stimulators of valuation we carry out the maximum value, and for indicators–disintegrators – at the minimum, which ensures the continuity of the function of the integral index and observes the condition for the change of normalized parameters in the range from 0 to 1. Accordingly, all indicators are normalized on the basis of the comparison method with the reference values in such a way:

$$z_i = \begin{cases} \dfrac{x_i}{x_{i,\max}}, & if\ \ x_i - \text{stimulant}\ ,\ i \in N,\ x_{i,\max} \neq 0; \\ \dfrac{x_{i,\min}}{x_i}, & if\ \ x_i - \text{disintegra tor},\ i \in N,\ x_i \neq 0; \end{cases}$$

where z_i — normalized statistical values of indicators ; and – the smallest and largest values respectively.

The next step involves the calculation of weighting factors that determine the contribution rate of each indicator to the integral index of economic safety of the insurance market of Ukraine using the main component of the Statistics program, which allows the use of the rotation of the quotient axes, which involves the rotation of factor axes in such a way as to increase the value of factor loadings taking into account the quality of the structure of all components. The latter characteristic is important for further use of the values of factor loads and the proportion of each component in the overall dispersion for determining the weight of the indicators [4].

Table 2

Integral index of economic safety of the insurance market of Ukraine

Year	The share of insurance in GDP,% (C)	Indicator of "insurance density" (insurance premiums per person), USD USA (C)	Gross Payments,% (C)	The share of long-term insurance in the total amount of insurance premiums collected,% (C)	Percentage of premiums belonging to reinsurers-non-residents,% (D)	Share of total authorized capital of insurance companies belonging to non-residents in their total volume,% (C)	The share of risks transferred to reinsurance,% (D)	**Integral index of economic safety of the insurance market of Ukraine**
	Normalized values							
2011	0,8500	0,7980	0,7868	0,6866	1,0000	0,9907	0,4500	**0,7928**
2012	0,8000	0,7891	0,8787	0,9736	0,8269	0,8106	1,0000	**0,8727**
2013	1,0000	0,7484	0,5956	1,0000	0,7167	0,9006	0,3836	**0,7722**
2014	0,8500	1,0000	0,6949	0,9338	0,7544	1,0000	0,3223	**0,7863**
2015	0,8500	0,7929	1,0000	0,8510	0,7544	0,9658	0,3514	**0,7647**
2016	0,7500	0,8806	0,9228	0,9069	0,5059	0,9472	0,3250	**0,7155**
2017	0,7500	0,7408	0,8934	0,7764	0,3805	0,9317	0,2773	**0,6465**
Weights rates	0,1488	0,1111	0,0492	0,1515	0,1620	0,1907	0,1868	

The calculated weighting factors and values of the integral index of economic safety of the insurance market of Ukraine are presented in table 2. We conduct an integral convolution for indicators of the economic safety of the insurance market on the basis of calculating the dynamic series of the integral index of economic safety of the insurance market of Ukraine and integral indexes of the limit values for the multiplicative form. It should be noted that the definition of boundary values involves the calculation of optimal

values of the indicator, which characterize the permissible range of values within which the most favorable conditions are created for economic development, as in our case, of the domestic insurance market.

In order to increase the level of visualization of the received dynamic series of the integral index of the economic safety of the insurance market, as well as to establish the relationship with the obtained limit values, we construct two graphs (see Figure 2).

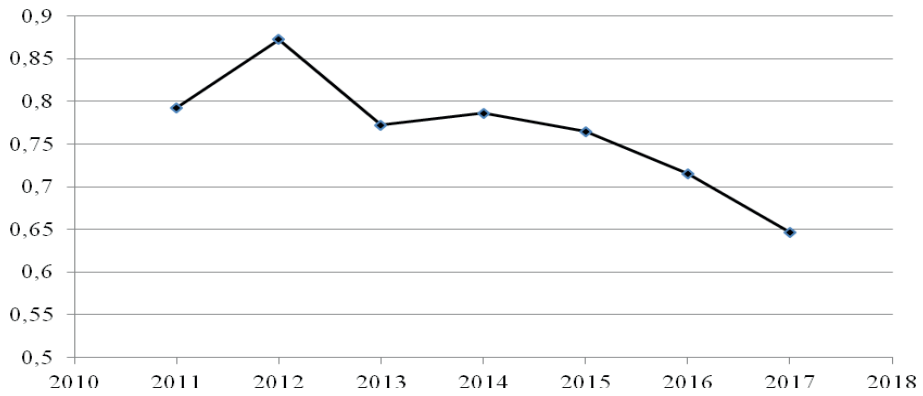

Fig. 2. Integral index of economic safety of the insurance market of Ukraine

The decreasing dynamics of the integral index of economic safety of the Ukrainian insurance market reflects the uniqueness of the conditions and characteristics of the development of the insurance market, the significant influence of destructive factors in pre-crisis and crisis periods. The low level of economic safety of Ukraine's insurance market is largely due to the influence of destabilizing factors that get the form of real threats, in particular of regulatory, institutional, organizational, managerial, social, subjective, globalization and related character.

Conclusions. The current state of the domestic market of insurance services requires directors and managers of insurance companies to make managerial decisions in conditions of uncertainty when the activities of organizations are under the influence of threats of internal and external nature. The presence of a tough competition on the Ukrainian insurance market deepens these problems. Therefore, today there is the issue of the formation of a system of management of the economic safety of insurance companies as a guarantee of their effective functioning. The main objectives in shaping the system of economic safety are: financial support for sustainable development of insurance entrepreneurs; minimization of insurance risks; taking measures to enhance the image of insurance companies on the market; timeliness and completeness of payment of insurance obligations; maximizing the market value of the subjects of insurance business.

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THE GC-CSR FRAMEWORK OF PRACTICE BASE IN CHINESE PRIVATE UNIVERSITY

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Annotation. *As the high development of high education in China now days, there are more and more new universities built. The need for teacher of new universities is huge, and part time teachers are very popular in China. However, there are many problems caused by the part time teachers, and the key problem is the lack of social responsibility. With the development of world economy and the competition of business, companies are paying more and more attention on lean management. So there are many lean management tools appearing nowadays, such JIT, Gantt chart etc. This paper tries to use Gantt chart of lean management to solve several problems of private university in China. Through the analysis of project backgrounds, project aim, project principles feasibility, etc., this paper makes a detailed project plan on how to construct a practice base in private university. This practice base can solve the most problems in the private university, and can also solve the problem in the national university that it is harder and harder to find a practice base for its graduates. However, there are still a few problems that should be considered if we really to put the project into real practice.*

Key words: *Lean management, Gantt chart, Practice base, Private University, National University*

Introduction. A teacher (also called a school teacher or, in some contexts, an educator) is a person who helps others to acquire knowledge, competences or values (Wikipedia). Nowadays, teacher plays an essential role in university with education, research and other social functions. The academic activity and occupational role of the university teacher is examined from a sociological as well as an educational viewpoint (Startup, 1980). And university teacher is the essential human capital not only for university but also for the development of whole society. Especially teacher-student relation (TSR) is very important in higher education. TSR should be regarded as a relevant construct in higher education as well, as it clearly affects students' successful study progress, including factors such as course satisfaction, retention, learning approaches and achievement (Hagenauer & Volet, 2014, Lentner, 2007).

Teaching is a highly complex activity (Caena, 2011). There are many teaching methods developed to accomplish this relatively complex activity, such as lecturing, demonstrating, collaborating, discussion, etc. Today, many new teaching methods have been produced to guarantee teaching quality and efficiency, for example, incorporate television, multimedia and other modern electronic devices. However, lecturing, even

with modern electronic devices, is still a main teaching method especially in private schools. The lecture method has a few advantages that has kept it as the standard approach to teaching for so long (Paris, 2014). One of the advantages is that lecturing is the most efficient and cheap method compared with others. And

There are thousands of private universities in China, and many of the private universities that were founded in the early 1990s (Lin, 2015). They are still younger compared with private universities in other countries such as USA. Private universities in China will need many years to establish their credibility and reputation and gain the autonomy they have coveted (Lin, 2015). Because private university is short of capital and foundation, they employ a lot of part time teachers whose number is shown in following table 1.

Table 1

Situation of teacher distribution in China private university

Year	Non-government HEIs			Independent Institutions			Other Non-government HEIs		
	Educational	Full-time	Part-time	Educational	Full-time	Part-time	Educational	Full-time	Part-time
2015	423620	304817	118803	176679	132124	44555	24427	11107	13320
2014	412824	293954	118870	183308	136303	47005	26290	12083	14207
2013	398400	281415	116985	186262	138815	47447	28394	13350	15044

Source: China Statistical Yearbook 2016. Website: http://www.stats.gov.cn/tjsj/ndsj/

There still many problems about Chinese private universities, the most of which are the problems on teacher and teaching in Chinese private universities. Part time teacher is a key power in the development of private university teachers, and plays a key role in the private education development (Yongying, 2008). This paper will talk the detailed of these problems in the following separate chapter.

As society goes on, public opinion of the roles of companies in society has shifted dramatically in recent decades (Steenkamp, 2017). Enterprises should not only be profitable tools, but also be responsible citizenships (Tai et al, 2014). Corporate Social Responsibility (CSR) as a notion was typically shelved by many organizations in the developing world until the recent recession, which has finally awakened the leaders from their procrastination and traditional way of thinking and gave rise to social responsibility (Suliman, 2016). However, in China, social responsibility is still not a key topic for private universities in China. Party representatives are given executive vice president positions, with other executive management positions being filled by employing relatives. These executives, with minimal or nonexistent educational experience, view these universities as highly profitable enterprises (Ozturgut, 2015).

Research methodology. Research methodology which is defined as "a strategy or architectural design by which the researcher maps out an approach to problem-finding or problem-solving (Buckley et al, 1976)". Research methods reflect the approach to tackling the research problem (Jamshed, 2014). A better research methodology will help to develop research work and get research results efficiently and effectively.

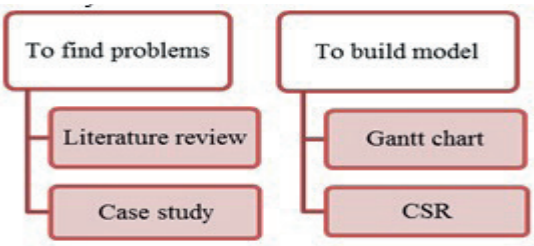


Fig. 1. Research methodology and tool

In this paper, in order to find problems exiting in private universities, we use literature review and case study.

A literature review is an evaluative report of information found in the literature related to your selected area of study[1]. The aim of literature review could regard: integration (such as, to clarify contradictory ideas or to bridge the gap between theories and practices), criticism (such as, to critically examine the literature to demonstrate the unwarranted previous theories), central issue (such as, what has been studied in the past, what researchers will study in the future, what has hindered the development of some topics, and so on) (Cocchia, 2014). In order to find the problems existing in current private universities in China, this paper uses literature review (shown in figure 1).Case study is not a method in itself, and it is a focus which is on one thing in depth and from many angles (Thomas, 2015). Cased study is used in this paper to support to find the problems in Chinese private university.

Method Gantt diagram method is an intuitive method of schedule (Ren, 2015). Gantt charts remain popular management tools in spite of dating back over a century (Wilson, 2003). This paper uses Gantt chart to construct a GC-CSR framework for private university in China.

Research objectives. A critical component of a successful research engagement is a set of clearly defined and meaningful objectives (Lyons, 2017). This article wants to solve some problems facing Chinese private university. Firstly, this article analysis the current situation of private university in China and what problems private university faces. However the key problem of private university now is the lack of social responsibility.

And then this article makes a GC-CSR model to social most of problems that all new universities face in China. GC-CSR model means Gantt chart model based on corporate social responsibility. With solving these problems, this article wants to achieve the following problems as shown in figure 2.

The general objectives of this research can be divided into two parts: problem-finding part and problem-solving part. During the problem-finding part, this article wants to find the real problems exiting in Chinese private university teachers. And then in the problem-solving part, this article is to solve all the problems with the construction of GC-CSR model.

1 This concept is from CQUniversity Library. Website: https://libguides.library.cqu.edu.au/litreview

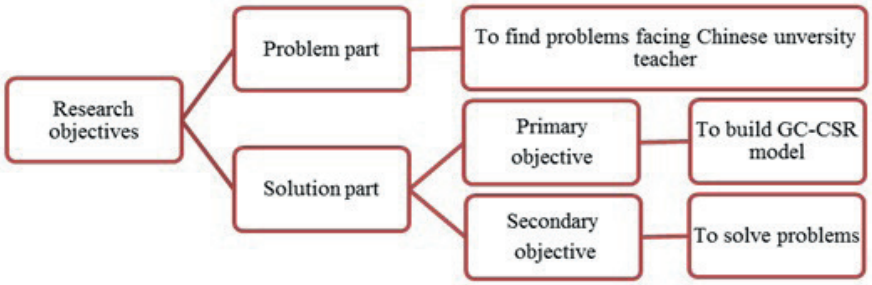


Fig. 2. The detailed research objectives

Current problems in private university part time teachers. At present, there are many new private universities built in China, and they are a lot of part time teachers, most of which are the retired teachers from Chinese national universities. However, there are still more and more young teachers graduated from university with master degree. So there are several problems appearing while they are teaching, which can be shown in the figure 1. However, most of these problems relate to the lack of social responsibility.

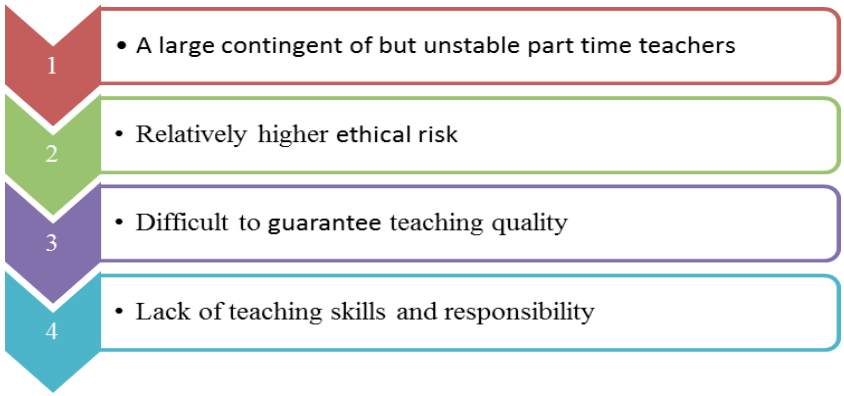


Fig. 3. Current problems in private university teachers

1. A large contingent of but unstable part time teachers

Because of lower salary, less compensation, no social security system etc., private university doesn't have unstable teachers (Hao, 2015). And private education in China is still very young, so private university cannot recruit and develop a stable full-time teachers as state-owned university, at last, part time teacher is the majority (Yufang, 2006). There are a huge number of part time teacher in most private universities, even in some new private universities, the number of part time teachers is 1-3 times more that full-time teachers (Yuanfang & Liying, 2008). Part time teacher always take a few courses in different universities. For concern about the income of teaching, they will choose the university which pays a relatively higher teaching subsidy. So the private

university cannot hold a stable and high-quality teaching staff, and it will look for new teachers every year. This repetitive work will increase the cost of the private university

2. Relatively higher ethical risk

Because of information asymmetry and no constraint mechanism between private university and part time teacher, the ethical risk of part time teacher in private university is relatively higher (Jianbo & Liuxian, 2006). Compared with full-time teacher in private university, the management of part time teacher is relatively lax which makes part time teacher regularly asks for leave (Liuyi, 2011). Additionally, what part time teacher cares is only teaching salary, so they will drop one course if they get a higher teaching-salary course. In this situation, teaching quality cannot be guaranteed and teaching order does not exist. This is also one very normal ethical risk existing in Chinese part time teacher of private university.

3. Difficult to guarantee teaching quality

There are many problems in Chinese private university, however, to guarantee teaching quality is the hardest one (Yalei et al, 2015).

Some of the part time teachers are retired from the national high-quality universities; however, more and more young persons with master degrees become the part time teachers in the new universities. Some of them are very serious and responsible during the teaching, but others are doing whatever they want to do in the class.

4. Lack of teaching skills and responsibility

For the part time teachers, they are not the "real" teachers in the new universities, and they only care about the teaching subsidy without caring the teaching quality. So they don't want to pay more energy to the teaching preparation and teaching progress. In the mind of some part time teachers, they are not teaching but finishing the tasks from the new universities for the teaching subsidy. This will result in the relatively lower teaching quality of new universities.

Lack of responsibility is a key problem among all the problems (Liu Yan, 2010). At present, more and more graduates with master degrees become part time teachers, and even some of teachers come from the retired workers in the companies. So they have no backgrounds of education theory, no teaching experiences, and no teaching skills. From the investigation by Huina Zhou in Tianjin, most of part time teachers are lack of teaching skills (Huina, 2015). So there will be some problems during their teaching. For instance, they don't know how to use the textbooks, and some of them will "read" the textbooks instead of "teaching" the textbooks. However, some of them think that textbooks are old and useless, so they will teach only by their own working experiences. At last, teaching progress becomes story-telling progress, because they consider that practice is more important that theory.

In fact, the problems of part time teachers are not only the problems mentioned above. In this project plan, we only talk about the key problems related to our project plan.

The causes of problems. There are many causes for the problems happened in China. Such as: no stable contract guarantee; no implementation mechanism; no

constraint policies. There is no polices to supervise and motivate part-time teachers (Jianbo & Liuxian, 2006). Especially for some new-built private universities, it is much harder to hire enough part-time teachers.

Causes		
No stable contract guarantee	No implementation mechanism	No constraint policies

Construction of GC-CSR model

Environment analysis of GC-CSR model. For the correctness and success of project, this paper analysis project feasibility from four aspects, which are policy analysis, need analysis, financial analysis and risk analysis. All these four aspects are in figure 4.

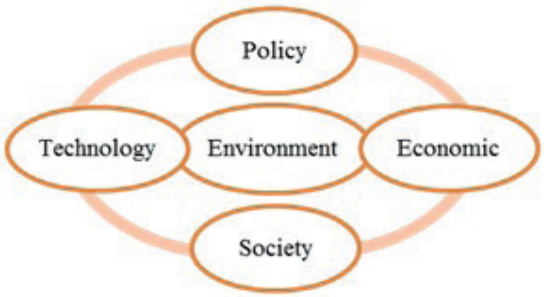


Fig. 4. Project feasibility based on GC-CSR framework

- Policy analysis

Practice is the prepare lesson for graduate to enter the society. Chinese government is paying more and more attention to the student practice. So it is possible for new universities to construct this project.

-Economic analysis

With the increase enrollment of master and doctor, master and doctor students are more and more. And they are desiring for practice opportunity, and expecting practice their knowledge. Especially nowadays, employer care more and more about graduates' ability to put their knowledge into the practice. And this project will provide a chance to practice graduates' knowledge and to get more experience before they start to work for their employers.

-Society analysis

Through the progress of construction will need some money, this money can be made up by the decrease of teaching subsidy. The detailed will be calculated and shown later.

-Technology analysis

The proper risk of the project is the teaching quality of students. In order to guarantee students' teaching quality, private university should make a monitor system that guarantees the teaching quality, which can reduce the risk.

Basic principles of GC-CSR model design. For the stability and sustainability of GC-CSR model, this article introduce several basic principles for GC-CSR model. And all the principles are shown in following figure 5.

Fig. 5. Basic principles of GC-CSR model

Model design based GC-CSR framework

1. Model integral design based on GC-CSR framework

Table 2

Model integral design based on GC-CSR framework

	1	2	3	4	5	6
Selection						
Train						
Teach						
Supervision						
Assessment						
Allowance and bonus						
CSR						

2. Detailed design of Model based on GC-CSR framework

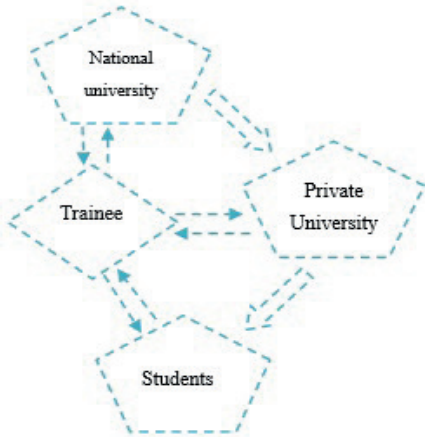


Fig. 6. Detailed design of Model based on GC-CSR framework

Trainee office of private university

The responsibilities of trainee office of private university are like followings:

- To be responsible for the negotiation, cooperation, contract design and modification with national university;
- To receive practice guidance teacher and graduates from national university;
- To supervise and guide the practice of graduates from national university;
- To evaluate and sign the report of the graduate practice;
- To pay the related fees to the graduate practice.
- To sign contract with national university
- To sign a long term cooperation contract based on the equal consultation is the guarantee for the interests of private university, national university and practice graduate.

To send practice guidance teacher and graduate

According to the cooperation contract, national university sends practice guidance teachers and graduates every year. The graduates will give trial lectures and then do their practice. The practice guidance teachers will guide the whole progress of the practice and give proper advice to help the graduates to improve their abilities and skills.

To have trial lectures

Before the formal practice, graduates should give trial lectures, and the trainee office of the private university and the practice guidance teacher will listen to the lectures, evaluate and coach the graduates to make them be a better teacher.

To sign practice contract with graduates

In order to protect the interest of graduate and private university, it is better to sign a cooperation contract between private university and graduate based on the equal consultation.

To practice formally

According to the trial lectures and the advantages of graduates, private university sends the graduates to different schools of private university, and then the formal practice is beginning according to the schedule.

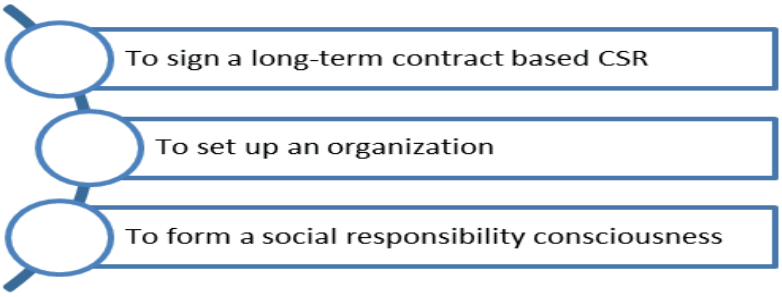
To guide and supervise during the whole progress

During the whole progress of guidance and supervision, the private university and practice guidance teachers should cooperate to guide and supervise all the lectures given by graduates, because the teaching quality and the interests of students in the private university is also very important.

To evaluate the practice and pay the related fees

According to the advice of practice guidance teachers, the supervision of trainee office of the private university, the teaching evaluation of students in private university, trainee office of private university will give formal practice report to every graduate. And the related practice fees will be paid by the report.

3. Policy advice to guarantee the GC-CSR model



Conclusions and discussions. Through the construction of private university laboratory project plan, private university can communicate with national university, and introduce more graduates from national university to practice in private university. In this case, a stable, high quality teaching staff will be formed gradually. Firstly, this project plan can solve several problems caused by the part time teachers, such as course fee is higher, the responsibility is not enough, and the teaching staff is not stable. Second, this project plan can provide a competition mechanism for the private university and let the full time teachers have a risk sense and improve their own abilities, at last, the whole teaching quality of private university will be improved.

Discussion.

A. the selection of national university

In order to guarantee the teaching quality of the graduates, and for the concern of both interest of private university and national university, this project plan suggests that private university should select high-quality national university.

B. the selection of graduates

In order to be responsible for the students in the private university, the graduates who will teach in the private university should have better exam performance, higher speech ability, better organization ability and proper teaching skills.

C. progress management

For monitoring the graduates who will practice in the private university, private university should take some plans to guarantee the practice quality.

D. Result evaluation

The private university should make a quantitative evaluation framework to evaluate the practice results.

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ESTIMATION OF FINANCIAL CAPACITY OF THE UNITED TERRITORIAL COMMUNITIES IN DECENTRALIZATION CONDITIONS

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Annotation*. The article assesses the financial capacity of the United territorial communities (UTC) in Ukraine under the current conditions of decentralization. The analysis of own revenues of budgets of the combined territorial communities in the context of the main budget-forming taxes, the growth rates of the general fund revenues of the combined territorial communities in the regions of Ukraine, and the change in the balance of funds of the general fund of the budgets of the combined territorial communities of Ukraine, as well as the dynamics of state support on the development of OTG and the development of their infrastructure in the structure of sources.*

Key words: *united territorial communities, own resources, financial capacity, fiscal decentralization, income base.*

Problem setting. In the process of decentralization reform, the issue of sustainable development at the local territorial level is very relevant and important in terms of stabilizing the social and economic situation in the country regions. Fiscal and budget decentralization has become the basis for the significant growth of own financial resources of the budgets of the united territorial communities. However along with additional financial resources, the local self-government bodies have received more authority in maintaining the budget institutions and providing social services to the population of their community. Thus, the transformation of local self-government in the process of decentralization requires proper provision of financial capacity of territorial communities, as well as monitoring the efficiency and legality of using their own financial resources.

Analysis of recent research and publications. The research of local budgets of the united territorial communities and their development in the decentralization conditions was carried out by N.I. Vlasyuk, K.F. Kovalchuk, V.I. Kravchenko, N.I. Kulchytskyy, N. V. Kuchkova, V. M. Oparin and others.

Unsolved parts of the common problem. The process of forming financial receipts in the budgets of the United territorial communities and the realization of the powers received by the local authorities remains insufficiently investigated.

Problem formulation. The main purpose of the article is to study the dynamics of financial receipts in the budgets of the United territorial communities in the conditions of decentralization, their structure and efficiency of use.

Statement of the main material. Based on the results of our own previous research, it is fair to say that it was fiscal decentralization that became the fundamental basis for the formation of financial solvency of the budgets of the United territorial communities in Ukraine.

Thus, summarizing the above analysis, we will find out certain trends in the formation of the revenue base of the United territorial communities in terms of the dynamics of the revenues of own resources in terms of sources and their actual revenues per person.

In favor of the effectiveness and productivity of fiscal decentralization, the relevant indicators, in particular, the volumes of revenues generated by UTC (Table 1), are indicative.

Table 1

Dynamics of receipt of own revenues of UTC in Ukraine for the period of 2015-2017, mln. UAH

Payments to the budget	Receipts			Deviation			
	2015	2016	2017	2016/2015		2017/2016	
				+/-	%	+/-	%
Personal income tax	43.0	1749.0	5211.7	1706	4067.4	3462.8	298.0
Excise tax	218.9	709.1	794.2	490.2	323.9	85.1	112.0
Land fees	354.1	1168.1	1402.0	814.0	329.8	233.9	120.0
Single tax	276.5	1042.0	1402.6	1015.5	376.8	360.6	134.6
Real estate tax	38.3	76.8	132.5	38.5	200.5	55.7	172.5
Total	1010.9	4959.6	9275.6	3948.7	490.6	4316.0	187.0

Compiled and calculated by the author on the basis of data [7;8]

Due to the changes made to the tax and budget legislation in the context of decentralization of receipts of the local combined communities budget revenues grew more than 3 times (by 3.9 billion UAH) compared to 2015 (from 1 billion UAH to 4, 9 billion in 2016), in 2017, compared with the previous 2016 - by 4.3 billion (+ 187%). In accordance with Article 64 of the Budget Code of Ukraine, UTC have received 60% of the tax on personal income (such as created by the law and the long-term plan for the formation of territorial communities). Income tax on personal income in 2017 amounted to 5.2 billion. (+5,157 billion as compared to 2015), land fees – 1.4 bln. UAH (+ 1.05 billion UAH), the single tax – 1.41 bln. UAH (+ 1.13 billion UAH), excise tax on the sale of retail trade excisable goods (oil products, tobacco and alcohol products) by business entities – 709.1 mln. UAH (+ 92.6% compared to 2016).

In general, the growth rate of local taxes and fees of local budgets in 2017 as compared to 2016 (according to the budget levels) demonstrates positive dynamics (Fig. 1).

As you can see, the most positive increase among the levels of local budgets is precisely the UTC's budgets, both in general and in the context of individual taxes and tax payments.

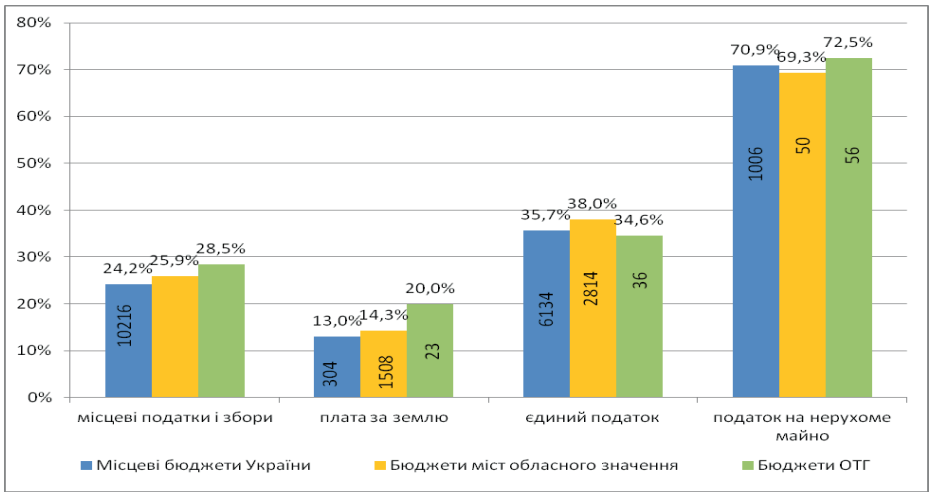
According to the Ministry of Finance and the Ministry of Regional Development of Ukraine, UTC's own revenues grew due to such tax receipts:

- The national tax on personal income, which was reserve for UTC's budgets according to the budget changes by 60% and amounted to 1.7 bln. in 2016.

- Local land tax, which is included according to the tax changes of 2015 to the property tax, and amounted in the corresponding year to 558 million UAH, with an increase of 58%;

- Local single tax in the amount of 447 mln. UAH with growth by 57% compared with 2015,

- The national excise tax on the sale of excisable goods (oil products, tobacco and alcohol products), which was also allocated in a certain part to the budgets of local self-government and amounted to 368 mln. UAH in 2016, up 68% in the previous year.



Місцеві податки і збори	Local taxes and fees
Плата за землю	Land fees
Єдиний податок	Single tax
Податок на нерухоме майно	Real estate tax
Місцеві бюджети України	Local budgets of Ukraine
Бюджети міст обласного значення	Budgets of cities maintained by the regional government
Бюджети ОТГ	UTC's Budgets

Fig.1. The growth rate of local taxes and fees of local budgets in 2017 to 2016. (according to the budget levels), in % and million UAH.
Constructed by the Author based on data [9]

Due to the growth of the budgets of the united territorial communities own revenues, tax receipts per one resident of the UTC have increased from 700 UAH in 2345 UAH, with an absolute increase by 1645 UAH. In the process of fiscal decentralization, there are also significant changes in the formation of balances of the general fund of budgets of the United territorial communities of Ukraine. Thus for the period 2015-2016 their volumes have grown almost threefold and amounted to 1.1 bln. UAH with growth by 0.8

billion UAH. (Table 2).

Table 2

Changes in the balance of the general fund of budgets of the United territorial communities of Ukraine for the period of 2015-2016.

Characteristic / year	01.01.2016	01.01.2017	2017-2016
The balances of the general fund of local budgets of the United territorial communities of Ukraine, billion UAH.	0.3	1.1	0.8

Constructed and calculated by the Author based on data [9]

It can be concluded that the vector of transformational processes in the tax system of Ukraine is positively directed in the context of fiscal decentralization.

Also, analyzing the dynamics of state support for the development of communities and the development of infrastructure, which has grown 39 times over the past four years, we come to the conclusion that an important source of financial sustainability of UTC budgets for the implementation of investment projects in the context of the financial decentralization reform is the State Regional development Fund of Ukraine (Table 3).

Table 3

The dynamics of State support for the development of UTC and the development of their infrastructure in Ukraine for the period of 2014-2016.

Characteristic / year	2014	2015	2016	2017
Amount of State support for the development of UTC, billion UAH, in particular:	0.5	3.7	7.3	14.9
Subvention for social and economic development, UAH billions.	0.5	0.8	3.3	5.0
Share in the amount of State support,%	100	21.6	45.2	33.5
Funds of the State Fund for Regional Development, UAH billions.	-	2.9	3.0	3.5
Share in the amount of State support,%	-	78.4	41.1	23.5
Subvention to the infrastructure of the united territorial communities, UAH billions.	-	-	1.0	1.5
Share in the amount of State support,%	-	-	13.7	10.1
Subvention for the development of medicine in rural areas, UAH billions.				4.0
Share in the amount of state support,%	-	-	-	26.4
Funds for the construction of football fields, UAH billions.	-	-	-	0.27
Share in the amount of State support,%	-	-	-	1.8
EU funds to support the sectoral regional policy, UAH billions.				0.65
Share in the amount of State support,%				4.3

Constructed and calculated by the Author based on data [9]

In the course of fiscal and territorial decentralization, the newly created local self-government bodies - united territorial communities have received greater financial viability and independence in the formation and use of budgetary funds. However, UTC received more powers and responsibilities for managing their own infrastructure, its maintenance at the expense of the community budget, state support (subventions, basic subsidies), funds of State and International funds.

Thus, it is worth noting that the budgets performance indicators reflect the overall socio-economic situation of the respective territory and its potential for the further development. Availability of sufficient resources in local budgets is a guarantee that the territorial community will have the opportunity to provide better and more diverse services to its residents, implement social and infrastructure projects, create conditions for the development of entrepreneurship and attract investment capital, develop local development programs and finance other measures for the comprehensive improvement of living conditions of the community.

Conclusions. Thus, the formation of the revenue base of the budgets of the United territorial communities in Ukraine from the moment of their legislative consolidation and up to the present time of the permanent process of their formation in each region of the country (with different dynamics), we can state certain positive effects on the introduction and implementation of decentralization processes, in particular - fiscal decentralization. Thus, based on the above mentioned analysis we can generalize the increasing of the volumes of own resources (tax revenues and payments), strengthening of the financial independence of individual UTC in the context of regions (availability of a reverse subsidy or non-subsidy), significant raise of the level of own incomes per 1 UTC resident in all regions the like. In the context of this, we consider it necessary to identify a number of factors through which it is possible to explain the existing trends and which should be taken into account in the process of forming the revenue base of the UTC budgets:

- The introduction of a fundamentally new approach to financial territorial equalization in Ukraine - the replacement of the system of balancing the incomes and expenditures of local budgets with a new, horizontal, leveling system for the taxability of territories and the introduction of basic and reverse subsidies. Now, the volumes of these subsidies can be determined by the local authorities independently, because they are based on the indicators of official treasury accounts for the past year. In the process of equalization, the value of the taxability index of the corresponding budget of the United territorial communities is taken into account;

- A new transfer policy - according to the State Budget of Ukraine, the Treasury Department of Ukraine transfers the basic subsidy and reverse subsidy each ten days, and the educational subvention and medical subvention twice per month. Subsidies are provided for the maintenance of public facilities or the elimination of negative consequences of the operation of public facilities. These new transfers are provided by the Ministry of Finance in the form of subventions, which reduces the maneuverability of using such a resource by local governments;

- Direct inter-budgetary relations with the State budget - territorial communities that will be united before October 15 of the year preceding the planned one, will be able to switch to the direct inter-budgetary relations with the State budget starting from the planned budget period;

- Independent formation of local budgets, independent of the term of the State budget adoption - independent formation of local budgets on the basis of stable fixed revenue sources and expenditure powers and key parameters defined in the draft state budget submitted by the Government to the Parliament before September 15 of the year preceding the planned and independent of terms of the adoption of the state budget approval of local budgets;

- Formation of a single basket of revenues of the local budgets general fund - a united basket of incomes of the local budgets general fund is formed (without dividing into I and II baskets) and sources of its formation are expanded due to: transfer of revenues from the State budget 100% of administrative fees, 100% State duties, 10% of the profit tax of private sector enterprises; introduction of excise tax on the sale by retail trade entities of excisable goods; expansion of the tax base for property tax by including in this tax commercial (non-residential) property and premium class cars; increase in the rate of enrollment of environmental taxes to local budgets from 35% to 80%;

- Financial support for the territories development - communities should be interested in the development of a regional development strategy and preparation of regional development projects. Financing will receive those regional development projects that correspond to the development strategy of the region and are included in the plan of its implementation. Ideas of projects should correspond to the priorities of the State fund of regional development;

- Obtaining additional financial and property resources - 25% of the environmental tax; 5% of the excise tax on retail sales; 100% of the single tax; 100% of the profit tax of enterprises and financial institutions of municipal property; 100% of the property tax (real estate, land, transport)) 60% of the personal income tax;

- Subvention from the State budget to local budgets for the formation of the infrastructure of the United territorial communities;

- Identification and implementation of the hidden and undervalued financial potential of the United territorial communities.

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PUBLIC ADMINISRTATION

MOTIVATION IN LOCAL SELF-GOVERNMENT BODIES: BASIC CONCEPTS AND CATEGORIES

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Annotation. *The purpose of this study is to uncover the notion of local self-government and the formation of their staff. It was identified tools for motivating employees and managers working in local self-government. The ways of influencing the managers and the local self-government personnel depending on the area are considered.*

Key words: *local self-government bodies, local council, motivation of labor, territorial community.*

The essence of the concept of "motivation" is researched in the article. The basic theoretical provisions concerning the motivation of the activity as a factor of increasing the functioning of local government bodies are determined.

The adaptation of Ukraine's state administration to the standards of the European Union requires the improvement of the efficiency and effectiveness of the civil service institute. The study of labor potential and ensuring its maximum use is the essence of the motivation of work in local self-government bodies.

An analysis of recent researches and publications. The analysis of scientific researches testifies that there is a large number of works of both domestic and foreign researchers who studied the topic of the motivation of the workers of local authorities. The Ukrainian scientists such as S. Zanyuk, V. Zakharchenko, VS Kusakin, T. M. Pakhomov, A. S. Sardayan, VA Shchegortseva and others made a significant contribution to the theoretical and practical aspects of the study.

The purpose of the article is to systematize theoretical knowledge about the system of motivation in local self-government bodies.

Presentation of the main research material. The service in local self-government bodies is primarily concerned with the formation of an effective human resource potential. The problems of human resources management work are relevant in all spheres of activity of local authorities. It needs the training of a new generation of personnel that would enable the leadership to form a highly qualified team in the system of executive bodies that can provide the development of territorial communities.

Local government is a "body formed by a territorial community in the manner prescribed by law for the fulfillment of tasks and functions of local self-government, granted in accordance with the law by the authorities, which are implemented in the legal and organizational forms determined by law" [3].

According to Art. 5 of the Law of Ukraine "On Local Self-Government in Ukraine" the system of local self-government includes:

• territorial community;
• rural, settlement, city council;
• rural, town, city head;
• executive bodies of the village, settlement, city council;
• the elder;
• district and region councils representing the common interests of territorial communities of villages, settlements, cities;
• bodies of self-organization of the population.

According to this law district councils may be formed in accordance with the decision of the territorial community of the city or city council in cities with district division. District councils form city councils and form their executive bodies and elect a chairman of the council, which at the same time is the chairman of its executive committee. A local self-government person is a person who works in local self-government bodies, has the appropriate official authority to perform organizational-administrative, advisory and advisory functions and receives wages from the local budget [10].

Ukraine declared the path of forming a powerful local government. The strength of the latter is determined by the ability of territorial communities, directly or through their democratically elected bodies, to decide on their own responsibility and most of the issues of local importance. [10]

Article 1 of the Law "On Local Self-Government in Ukraine" states that: "the territorial community is inhabited by permanent residents within the boundaries of a village, a settlement, a city that is an autonomous administrative-territorial unit, or a voluntary association of inhabitants of several villages having a single administrative center ". That is why it is very important for the most effective use of its new status in the interests of the community, in the interests of its development of the formation of the personnel capacity of the new united territorial communities.

In order to manage local affairs, local budgets and communal property, the local community forms local self-government bodies. The deputies and chairmen of the local council are elected in accordance with the Constitution of Ukraine, the laws of Ukraine "On Local Self-Government in Ukraine", "On the Status of Deputies of Local Councils", and other legislative acts of Ukraine.

The main features of local self-government bodies are their legal, organizational, material and financial autonomy. Local self-government bodies are established on the principles of democracy and legality, humanism and social justice, human rights and citizen's priorities, professionalism, competence and integrity.

The system of labor motivation plays an important role in the work of both higher and lower executive bodies. Its provision will increase the efficiency of the work of all bodies, thus contributing to the disclosure of the potential of each employee.

The term "motivation of labor" is understood as the combination of internal and external motorized forces that motivate a person to operate, give this activity the aim of

achieving both personal goals and goals of the organization.

Motivation was considered as one of the four components of the management cycle and as an instrument for ensuring effective organization activity in the works of J. Zavadsky, L. Chervinska, V. Shynkarenko, O. Krivoruchko, G. Gogol,.

Yu. Zaitsev, O. Krasnonosov, I. Kravchuk and others focus on the problems of material incentives for workers [4].

The researcher L. Artemenko gives a definition of motivation as a mechanism in public administration and introduces the concept of "motivational mechanism". According to the author, the motivational mechanism is a combination of ways to achieve the positive goal of public administration by attracting the potential of legal, material, informational and psychological influence on the whole system of public administration in the whole, on the elements of this system, including some individuals who perform certain functions in apparatus of state administration or interact with it [9].

Thus, motivation is a driving force that is based on the satisfaction of specific needs and makes it work with maximum efforts to achieve a certain goal. The motivation of labor activity may only be exercised with the use of modern methods and forms of material and non-material incentives for staff.

In general, based on the analysis of sources and literature used, it can be argued that various interpretations of the term "motivation" are used in the field of public administration. All of them mean the process that occurs inside the person and induces it to action.

The use of labor motivation in local self-government bodies plays an important role. At present, in the context of decentralization, there is a lack of highly qualified personnel, lack of professionalism and independence, which leads to a decrease in the efficiency of the activities of local self-government bodies. These problems arise from the inadequate motivation of labor.

We fully agree with the views of Ovsyuk N.V., who believes that motivation should be considered at the individual level of each individual employee, who has his or her own motives for work [7]. Therefore, the most complex and most responsible role in the construction of an effective system of motivation in local self-government bodies belongs to the head of the organization, namely the head of the territorial community. A manager who seeks to obtain from his or her subordinates a maximal dedication to the achievement of certain goals, must understand the purpose of each of them in order to provide motivational incentives, because the needs of employees are not sustainable. They vary depending on one or another professional situation. Therefore, the management strategy in local government should be based on the need strategy, which is to combine such elements as the definition of individual needs and the creation of an appropriate work environment for their satisfaction. After all, the employee is interested in his professional development only when he sees that his work is in accordance with his interests, is paid properly and promotes satisfaction of his professional needs.

The needs of workers are not constant. They are formed in accordance with their development and professional growth, values in the society and stimulation of

professional growth, which should be taken into account when motivating work and stimulating professional development.

The main factors that complicate the process of managing the motivation of subordinates are highlighted.

1. The motives of human behavior are extremely unclear and very difficult to detect. Human behavior should be observed for a long time to find out its leading motives.

2. Motivational processes are characterized by variability. Human needs can change depending on the situation.

3. Employees of various structural units have different motivational incentives.

4. Wide variety of ways and methods to meet individual human needs.

5. Interdependence of work in organizations, lack of awareness of the results of employees, frequent changes in official duties.

6. Formation of the system of motivation is not on the first place in the leadership.

Today, the local governments of local communities' influence significantly increases on local economic and social development due to their significant powers and their respective resources. And community development, the guarantee of peace and stability are directly dependent on the efficiency of work, reasonableness and speed of decision-making by the council of the territorial community. It still depends on the ability of the deputies of the council, their desire to reconcile their own interests with the needs of the community and the resources available, and to maintain direct contact between the council, the head of the community and the whole community.

The local council may by its decisions either create the best conditions for its development in the territorial community, open the way for the activities of small businesses, which will enable to increase not only the revenues to the local budget, but also the incomes of households that became the source of these businesses or, conversely, bring the community to decay [10].

At the base of one of the approaches to motivating employees is their material incentive, but local council deputies do not receive wages for their work in the council, so they must have other motives, interests and arguments to such an authority and the appropriate system of motivation.

Most deputies of a village, settlement or city council are residents of the city or village they manage. Therefore, in our opinion, the main motivation lies in local council's powers and in the powers of the deputy of the council, with the help of which there is an opportunity to develop a community in which a particular deputy lives. They create their own home as they imagine it themselves.

But there is another category of deputies who are elected to the council but do not permanently reside in the territory for which they have their own career in the first place. In this case, as a motivation for them becomes an opportunity to improve managerial skills, career and managerial experience.

We cannot exclude the third category of so-called "random deputies" who fell into the council on a list from a political party, the main motive of which may be the ability to solve some of their issues. When working with them it is rather difficult to establish a

proper motivation due to the impossibility to pick up the motives that they are moving.

The chairman is responsible for the team that works in the community. It's his task to create a system of deputies' motivation, previously divide them into categories.

Village, town, city mayor is also a member of the territorial community. A person who is elected to the post of chairman, as a rule, constantly lives with his family members, uses community services and social infrastructure - shops, places of recreation, health care institutions. The basis for motivating the position of the head is the personal interest in the devoted effort to change the community for the better, while the village, the city had an attractive appearance, and institutions located on its territory worked fruitfully to the maximum benefit for people, to satisfy their material, spiritual and cultural needs.

The head of the community should be the main initiator of changes in the community, the activities of executive boards of the council, the preparation of various projects and initiatives. But in order for ideas to be realized, they must become the ideas of masses. That is why it is very important to create a team of motivated people who work in the interests of the entire territorial community.

It is necessary to constantly monitor the needs and motivations of the workers in order to properly select incentives and improve the system of motivation in local self-government bodies. Conservatism in stimulation of labor leads to a decrease in the level of professionalism, in the promotion of their professional level, to passivity and indifference in the service activity. It is necessary to stimulate not only the work itself, but also the very fact of obtaining specialty by the profile of its activities, improving its qualification.

The system of motivation in the bodies of local self-government needs the ability, persistence and understanding of human nature, and also requires the powers of the leader to encourage the performers to make the maximum effort to achieve high results of labor.

In our opinion, the main factors for increasing the motivation of local government officials are:

a) sufficient material incentives, which should depend on the results of work;

b) moral stimulation of officials;

c) creation of favorable conditions for career promotion of officials;

d) increasing the prestige of service in local self-government;

e) activity of managers, in relation to the motivation of subordinates;

e) the formation of motivational competence among managers.

Conclusions. The issue of developing a system of material and moral factors that would have been able to activate the maximum work of workers, given the low level of motivation of work in local self-government bodies, is becoming more and more relevant nowadays in Ukraine. The main role in this process is played by the leader. His main task is to provide incentives for labor in terms of psychological characteristics of each person, the identification of their employees with internal motives to work activity. To provide an effective system of labor motivation, the leader of local government bodies should use the elements of foreign systems of motivation of labor.

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PEDAGOGY AND PSYCHOLOGY

FORMATION OF COMMUNICATIVE CULTURE OF A FUTURE TEACHER OF MUSIC : RESEARCH RESULTS

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Annotation. *The article deals with the results of the research theoretical and methodical backgrounds of formation of artistic and communicative culture of a future teacher of music. According to the study of methodological backgrounds of the research and carries out its analysis on the basis of implementation of conceptual models, methods and methodological approach to the process of the formation of artistic and communicative culture of a future teacher of music, finds out the reasons of persistent changes in their communicative culture, provides confirmation of positive dynamics of its manifestation on the level of readiness for cultural interaction.*

Key words: *readiness of educational process, methodological approach, future teachers of music, artistic-communicative culture, experimental author's model of methodical system.*

Introduction. Radical changes in the educational policy of Ukraine, directed to integration into the world educational space, need to preserve of features of national educational systems, improve their quality and competitiveness, focus on humanistic values, causes the conversion of the system of training future professionals in compliance with international educational standards. In this context, to a considerable extent, updated the problems associated with the training of teachers of music as a competitive and competent professional, there is a reorientation of art education with premetastatic model on cultural, intend the education of «human culture»: culture of thoughts, feelings, cultivation of creativity, personal artistic positions.

Theoretical background of the research. The analysis of philosophical, cultural, psychological and pedagogical scientific literature suggests that the the investigated problem is considered by scientists in various aspects, namely: the philosophical and methodological approach to the problem of communicative culture as an important component of the overall culture of the individual (V.Andrushchenko, O. Arnoldov, M.Bakhtin, M.Buber, J. Habermas (Jürgen Habermas), H. Gadamer, A.Dymer, L.Kohan, V.Kulman, T.Marsel, M.Mykhalchenko, E. Mounier, L.Kohan, G. Mead (George Herbert Mead), J. Ortega y Gasset, S.Sarnavska, M.Heidegger, K.Jaspers etc.); the necessary prerequisites for the problem solving of formation of this phenomenon create studies mark out the theoretical and methodological foundations of professional communication (H.Ball, M.Kahan, S.Maksymenko, L. Orban-Lembryk, T.Tytarenko, T.Yatsenko etc); the essence and structure of communicative abilities (H.Vasyliev, N.Vitiuk, O.Leontiev, B.Lomov, M.Obozov, K.Platonov etc.); psychological specificity of the communicative

competence of personality (Yu.Yemelianov, L.Petrovska, V.Ryzhov, S.Tereshchuk etc.), features of creative interaction between teacher and student in the process of learning music (L.Koval, P.Kovalyk, V.Revenchuk). Work in the field of artistic pedagogy (O.Apraksina, L.Archazhnykova, N.Huralnyk, O.Yeremenko, B.Likhachov, O.Otych, H.Padalka, O.Rostovskyi, O.Khyzhna, O.Shevniuk, O.Shcholokova etc.) cover a wide range of problems associated with finding the best ways to establish interpersonal relationships in the dyad «teacher-student». However, the analysis of methodological and methodical literature related to the thesis suggests an insufficient level of research in theoretical and methodological aspects.

So, the aim of this article with the results of the research theoretical and methodical backgrounds of formation of artistic and communicative culture of a future teacher of music. The task of the article are : based of the substation of the methodological foundations of the problem under consideration, to present an analysis of its results. This thesis is a complex research devoted to the scientific problem of forming the artistic and communicative culture of the future teacher of music in the process of their training in higher educational institutions in the context of modern educational paradigms.

Based upon the systemic analysis of the definitions «culture», «communicative culture», «artistic activity» in the research there was determined the content of artistic and communicative culture of the musical teacher, which we interpret as an integrative personal quality, which causes his ability to set emotional and psychological contact with a student in the process of art learning, transformation of artistic and educational interaction into a culture creating process. Artistic and communicative culture of a music teacher determines a vector of his humanistic orientation on acknowledgement, rethinking and correction of his own subjective development and realization in process of communication with art of student's unique personal creative potential.

The structure of artistic and communicative culture of a future music teacher includes motivational requirement, learning competential, regulative connative, reflexive valuing and creative presentative components.

The motivational requirement component implies the presence of conscious interest of students in mastering the means that help to establish emotional and psychological contact with a student in the process of artistic communication; learning competential component absorbs the basic artistic and communicative competences of the future music teacher; regulative connative component characterizes the ability of the future music teacher to correct the emotional and psychological color of the artistic and communicative process, the ability to choose an optimal style of behavior in changing conditions of artistic communication; reflective valuing component represents the ability of the future teacher of music to realize their own communicatively meaningful qualities, to analyze and evaluate personal feelings and states in a certain artistic and communicative situation at a lesson, the ability to adequately perceive and reflexive-empathic assessment of a student; creative presentative component assumes the ability of the future teacher of music to self-presentation, the creation of a pedagogical image, the manifestation of artistry, mobility and improvisation in artistic and communicative

actions.

One of the most important tasks of modern education is the strengthening of links between culture and education. The culture of personality characterizes not only the ability to direct dialogue with art, but also «communication about works of art», that is, interpersonal communication subjects of artistic activity, which refers to the artistic value of specific artists, their creativity, their own tastes, preferences, interests and so on. The Art, as «the highest form of communication in culture» (O.Leontiev), affects feelings, emotions, experiences, personality, makes profound changes in its existential «Ego» (L.Mitina, O.Melik-Pashaiev). In the process of music perception occurs «understanding co-creation» (M.Bakhtin) the most active holistic perception, based on the empathy of the author's vision of the world, independent creative thinking, evaluation and interpretation of image content of the composition, emotional passion intonational images that affect «the activity of music-sensor systems and the mode of functioning of cognitive processes» (L.Bochkarov). «The emotional connection and the semantic field of» unity in diversity» (V.Razhnikov), the desire to «objectivization» of personal meaning through its coordination with value-semantic field of the composer's works develops the need for discussion of artistic impressions, builds the capacity of aesthetic judgments about art work that stimulates learning about myself and other people and thus having a positive effect on the development of intellectual, emotional, and behavioral domains of personality.

So, the artistic image is the center of interpretive approaches, interpretations, which regulates and determines the vector of personal and professional relations of the teacher and the student. Such communicative situations or find «consonance» the consistency of their artistic and axiological priorities, aesthetic tastes, or make it a «dissonance» in the relations of subjects of communication. Besides, students who have shown an increased natural talent, require flexible, changing strategies of musical-pedagogical interaction, which requires the teacher's special susceptibility, sensitives in the communication process. In the process of working with this student, the teacher needs to constantly change the palette of subtle emotional nuances of relationships with the personality of the student to exercise tact and delicacy to maintain his creative initiatives manifestations of artistic intuition, etc. From this it follows that the educational process may not be productive outside the establishment of appropriate communicative strategies in the educational process.

In substantive terms, the notion of «communication» is closest in meaning to the concept of «interaction» (the relationship), «mutual influence». Thus, the concept of «artistic and communicative culture» logically links the definition of the essence of pedagogical communication (interaction, relationships) in a system, defines it as a holistic psychological, spiritual formation. Besides, the definition of communication using the categories of culture, directs meaningful definition of this phenomenon from the position of the humanistic direction creative interpersonal relations between teachers and students.

Taking into account the main provisions of methodological approaches to the

development of modern art education: humanistic direction mastering the art; the national foundations of the artistic development of the individual; actualization-individualized approach to art education; implementation of field-artistic context of the professional art education; ensuring kulturosoobraznoj learning and the optimal balance between cognitive, ocenview and creative learning activities [4, 43], the essence of the artistic and communicative culture of the future teacher of music considered from the positions of the methodology of the system, synergetic, acmeological, student-oriented, cultural, axiological approaches.

In the system each of these approaches summarize the main sources of philosophical knowledge, the content of which directs the understanding of the problems of the formation of the artistic and communicative culture of the future teacher of music, namely: providing interdisciplinary connections based on a systematic approach; achieve kulturosoobraznoj musical-pedagogical training on the basis of cultural approach; take into account in the educational process of the internal resources of the personality of the teacher and the student and potential impact of external artistic environment based on a synergistic approach; this approach also involves the actualization of the principles of activity, Dialogic, self-reliance, initiative, creativity, when the participants of the educational process appear open, self-regulating, semideterminate systems, aspiring to the development of subjectivity; the assistance of subject-subject of the creative interaction of the teacher and the student on the basis of personality-oriented approach; the definition of objective and subjective factors that contribute to or hinder the achievement of the vertices of professional development on the basis of acmeological approach; the acquisition values the cultural aspects of the art of communication based on the axiological approach.

The theoretical basis of forming artistic and communicative culture in a future music teacher is an existential and reflexive approach, developed in process of the research. It is a system of scientific and pedagogical settings to provide artistic and creative interaction between a teacher and student, based upon actualization, constructing and deepening of such relations in artistic dialogue space, where the bases of subjectness, mutual value, mutual respect and coworking are most fully realized. Existential and reflexive strategy of musical studies supposes backing upon valuable aspects of learning interaction, allows the teacher to concentrate not only on his own feelings, but also to 'include' personally valuable experience of a student into the process of artistic communication. Effectiveness of musical teaching in this context is reached through encouraging the student to recognize his own feelings on what is personally important to him in art, and also tolerant attitude to artistic feelings of 'The Other'.

The existential and reflexive approach caused the development of methodical system, which includes targeting, theoretical, content, processive, methodical and value resultative components.

Targeting component of the methodical system supposes the designation of aim and tasks of forming artistic and communicative culture in a future musical art teacher: forming of student's readiness to musical educational activity at school (aim)

and development of ability to productively interact with students; forming of artistic thesaurus, managing methods of creating positive and creative atmosphere in musical educational process, actualization of humanistic directness of the personality (tasks).

Theoretical component of the methodical system is represented by such principles of forming artistic and communicative culture in a future musical teacher: providing possibilities for teachers and students to choose alternatively between artistic and communicative behavior strategies; achieving harmony in intellectual and emotional 'background' interaction; actualization of dialectical unity of ethical and esthetical bases in mastering the art by students; orientation to the value of 'culture dialogue'; identities of laying aims in artistic and communicative actions of a teacher and student.

These principles in interaction and interdependence make possible the systemic definition of pedagogical conditions, methods, means, ways and forms of organizing artistic and communicative students' activities in process of musical studies.

The content component of methodical system is oriented onto developing students' erudition in culturological basis of artistic and creative interaction of educational process subject; it includes: sources of forming contents (the Law of Ukraine On Higher Education, branch standards of higher education, culture creating context of artistic and learning space in higher educational institutions) and factors of constructing contents (development of special learning methodical equipment): special course «Basic forming artistic and communicative culture in future musical teacher», renewed work programs in students' pedagogical practice; author's project creative multimedia complex «Forming positive artistic and communicative image of future musical teacher»; methodical recommendation «Pedagogical guidance in forming artistic and communicative culture in a future musical teacher».

Processual and methodical component of the proposed system includes definition of pedagogical conditions (activating future musical teachers' ability to show congruent behavior in process of interaction with the teacher; providing subjectness of pedagogue and student in process of communicating with art; systematic implement of situations «mutual feelings – acknowledgement» artistic and communicative actions «here and now»; direction of learning process onto establishing spiritual and creative contact between teacher and student in process of artistic communication; stimulating the communicative flexibility of students in constructive certain artistic and communicative tactics) and learning rating blocks of methodical equipment in forming artistic and communicative culture in future musical teacher. Motivational and stimulating block is aimed on activation in students the will to master artistic and communicative culture, the aim of adaptive and regulative one is to enrich artistic and communicative competencies in students, reflexive and analytical is oriented on engaging students to adequate self-estimation of the course and results of intersubjectal artistic and creative interaction, creative and actualizing block provides development of students' ability to make up their own strategies of artistic and creative interaction. Each of those blocks includes methods, techniques, forms of cooperation with students ('brain drain'-like discussions, media-presentations, artistic web-dialogue), and also elements of diagnosing and self-diagnosing

the students (self-reports about passing pedagogical practices, test self-evaluation cards, individual digital portfolio etc.). There is provided a certain sequence of applying the defined module-rating blocks according to organizational and accomodational, learning and cumulative, corrective and conventional, project and presentation steps.

Evaluative and resultative component of methodical system creates basis for comparing and adjusting results of educational methodical equipment of artistic and communicative students' activities with tasks, formed in targeting component of the model.

Determined that theoretically substantiated and experimentally proven methodical system of forming artistic and communicative culture in a future music teacher guides the educational process on the systemic joint creation by the teacher and student of the space of artistic education; provides the future teacher of music with the possibility of independent, alternative approaches to the identification of the individual communicative style of activity with the student; creates conditions for the harmonization of the intellectual and emotional background of artistic interaction between the teacher and the student; complements the motivational factors of the professional formation of students as a component, as mastering the developer-co-constructive type of interaction.

The scientific novelty of the research is that for the first time in the theory and method of musical education: the essence is defined, the content, structure, criteria and indicators of the formation of the artistic and communicative culture of the future teacher of music are revealed; the existential reflexive approach as the theoretical basis for solving the problem of forming the artistic and communicative culture of the future teacher of music in the conditions of university education is substantiated as the theoretical basis for solving the problem of forming the artistic and communicative culture of the future teacher of music in the conditions of university education; the innovative methodical system of forming of artistically-communicative culture of future music, that embraces an aim, task, conceptual approaches, principles, structural components, pedagogical terms, methodology (organizational forms, methods, stages), pedagogical monitoring and consists of having a special purpose, theoretical, semantic, judicially-methodical and evaluation-effective constituents-components. Further developed: scientific understanding of theoretical foundations and practical conditions for improving the professional training of future music teachers; implementation of a personally oriented approach in the musical education of students.

The practical value of research results consists in development and introduction in practice of work of pedagogical universities of the educational methodical complex, which includes: our special course «Basic forming artistic and communicative culture in future musical teacher», «Methodical recommendation on pedagogical guidance in forming artistic and communicative culture in future musical teacher», author's project creative multimedia complex «Forming positive artistic and communicative image of future musical teacher», renewed work programs on pedagogical practice for students, author's system of communicative trainings. Developed educational methodical complex may be productively used by teachers, bachelors, aspirants and students of

artistic faculties of pedagogical universities.

Conclusions. Thus, emplementation of the methodological model in the educational process of forming artistic and communicative culture in future musical art teachers became the cause of lasting change in the communicative culture of students, which is confirmed by the positive dynamics of its manifestations.

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MEDICINE AND PHYSIOLOGY

THE IMPACT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE ON GUM EPITHELIOCYTES CONDITION

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Annotation. *Changes of gum epitheliocytes in patients with COPD are presented in the article. We found that change of cells quantitative correlation depended on them maturation degree. We also found prevalence of cells with terminal stage of growth and plenty cells with abnormal nucleus. One more result of our research is increased number of cells with receptor CD 95.*

Key words: *Chronic obstructive pulmonary disease, periodontal, epithelial cells, inhaled glucocorticosteroids.*

Urgency of the research. Presently, one of the priority prospect of dentistry is studying the defect of periodontium tissues taking into account all general and local factors. The data of the conducted researches indicate the active influence of internals and systems malfunctions on the tissues of the periodontal complex [2,5]. One of the most common somatic impairments directly affecting the oral cavity, and periodontium in particular, is chronic obstructive pulmonary disease (COPD) [7]. According to existing international standards, COPD is characterized by a progressive, persistent airway patency limit associated with higher inveterate inflammatory response of the respiratory tract to the action of harmful particles or gases [3]. The scientific researches confirm the frequent combination of the oral cavity diseases and the bronchopulmonary system, and their mutual grave disease progression, which, apparently, is associated with their anatomical and functional unity [6].

The standard treatment for COPD is basic and symptomatic therapy, with the inhaled corticosteroids (ICS) as the main medications and b2-agonists, as well as their fixed combination [4]. Inhalers, along with a positive effect, have a number of adverse effects, associated with long and uncontrolled use, with some in the oral cavity. With inhaling the abovementioned medications, only 10-20% of the substance reach the target, while 80-90% resting directly in the oral cavity, affecting the immune defense system [1].

Today, the subject of discussion is still the identification of early predictors of the disease at the cellular level with no clinical signs in the periodontium of this category of patients.

Research objective: to determine the cytological and immunohistochemical parameters of gingival epithelium of the patients with COPD.

Materials and methods of research. 38 patients with the diagnosis of COPD

(main group) and 20 patients without somatic pathology (control group) were selected for the research. COPD verification and the basic therapy were carried out on the basis of international criteria and recommendations of the Ministry of Health of Ukraine (data of anamnesis, general clinical examination, ECG, Echo-CS, chest X-ray, respiratory function).

Patients with COPD received m-anticholinergic drug or long-acting beta-2-agonists as a basic therapy, if necessary - short-acting bronchodilators, inhaled glucocorticosteroids.

Patients with acute or aggravated inflammatory processes in the oral cavity, endocrine disorders (diabetes mellitus), cardiovascular and digestive system diseases, as well as the patients who underwent thoracic surgery did not participate in the research.

To study cytological parameters, the attached gingiva material was scraped, with its further placing to a slide and drying. The specimens were stained according to Papainikolaou and Hoechst. The finished specimens were examined with a light microscope to obtain cell photographs. DNA-specific staining with acridine was used to differentiate nuclear anomalies.

The relative level of the apoptosis marker (CD95+) was determined with the help of monoclonal antibodies and indirect immunocytochemical method, and indirect immunocytochemical peroxidase method.

To study the proliferation marker of KI-67, a biopsy material from the interdental papilla was used along with indirect immunohistochemical method with monoclonal antibodies (Thermo Scientific).

Since in accordance with the Kolmogorov-Smirnov criterion, the distribution law did not correspond to the normal one, nonparametric methods of statistical analysis were used. Medians (Me), interquartile range (the first and third quartiles-Q1, Q3) were calculated.

To determine statistical differences between two independent groups, the Mann-Whitney test was used. To check the statistical hypothesis of equality, the unit odds ratio (w = 1) was measured with the criterion X2.

The results and discussion. When studying the cytology of scrapings, it was found that the patients with COPD had the greatest pathological changes, namely: a statistically significant decrease of the main formation cells (intermediate cells) with a significant increase in surface and keratinizing cells, that is, those within the final stages of differentiation (Table 1)

Besides, in the group of patients with somatic pathology, parabasal layer cells were found. It should be noted that parabasal layer cells do not occur in the epithelium of healthy tissues, and they can be regarded as a predictor of pathological changes in the gum tissues.

When studying the frequency of cellular anomalies, it was found that the patients of the main group were statistically different when compared with somatically healthy patients. Thus, the highest frequency of nucleus protrusions exceeded the control group parameters by a factor of 7 ($p < 0.001$) (Table 2). This nucleus anomaly is a genetic disorder, and is most likely related to the amplified DNA elimination.

Table 1

Distribution of gingival epithelial cells according to the degree of their differentiation

Characteristic	Control group	Main group	P
Parabasal cells	0.00 (0.00; 0.00)	0.00 (0.00; 1.00)	0.013
Intercurrent	59.00 (56.25; 61.00)	24.00 (20.50; 29.50)	0.001
Interfacial	11.00 (10.00; 13.75)	33.00 (29.00; 37.25)	0.001
Keratinizing	30.00 (28.00; 31.75	41.00 (38.00; 47.25)	0.001

Also, patients with COPD had a greater frequency of detection of binuclear cells compared to the control group. These changes testify of degenerative changes in the epithelium and happen due to the cell membrane disruption and cell's loss of cytokinesis abilities.

Table 2

The frequency of nucleus cellular anomalies of epithelial cells

Nucleus anomalies	Groups	Meaning	P
Protrusions («broken egg»)	Control	1.00 (0.00; 1.00)	
	Main group	7.00 (6.00; 8.00)	0.001
Binuclear cells	Control	2.00 (2.00; 3.00)	
	Main group	6.00 (5.00; 7.00)	0.001
Karyorhexis	Control	4.00 (4.00; 5.00)	
	Main group	11.00 (9.00; 12.00)	0.001
Karyolysis	Control	20.50 (18.00; 24.00)	
	Main group	32.00 (28.75; 37.00)	0.001
Vacuolated cell	Control	9.00 (7.25; 10.75)	
	Main group	21.00 (19.00; 23.00)	0.001
Micronucleus	Control	2.00 (1.25; 3.00)	
	Main group	3.00 (2.00; 3.25)	0.097

The main group patients had higher level of cells with micronuclei as compared to normal rates, but the change was not significantly different (Fig. 1).

Also, according to Table 2, all the patients with COPD had degenerative changes through nuclei karyorhexis and karyolysis, which can be not only the result of inflammatory periodontal disease, but also an adverse effect of medications prescribed to the patient as a basic therapy. Thus, epithelial cells with karyorhexis (degenerative changes with the cell nucleus degradation) were more than 2 times common in the main group, with the karyolysis cells (nucleus degenerative changes with complete disappearance) being 1.6 times higher than the healthy group index.

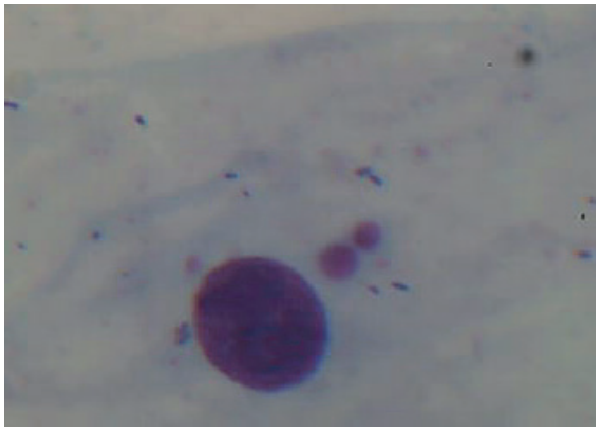

Fig. 1. A microphoto of epithelium scraping cytogram of the attached gingiva of a patient with COPD. An epithelial cell with micronuclei is defined. Magnification × 400.

During the research it was possible to establish that the group of patients with COPD had higher number of cells with the programmed cell death receptor (CD95+). The apoptosis main function is known to balance cell proliferation, to eliminate the damaged, transformed and infected cells; and proliferation index value (KI-67) was also significantly higher (3.3 times) than of somatically healthy patients (Table 3).

Table 3

Apoptosis and proliferation marker in study groups patients

Index	Main group	Control	P
CD95+	45.00 (43.00;46.25)	19.50 (18,00; 23,75)	0.001
Ki-67 (мкм2)	41727.164 (14217.487; 49094.761)	14476.419 (10553.686;18483.292)	0.001
Ki-67 Area	5.206 (4.617; 6.082)	1.575 (1.176;1.883)	0.001

Thus, all the changes in gingival tissue in patients with COPD are associated with both inflammation and the effect of medications prescribed for the leading pathology. Owing to the significant effector potential, the gingival epithelial cells change their functional status under the influence of exogenous and endogenous stimuli, both in forming and maintaining chronic pathology.

COPD activates the mechanisms stimulating the terminal stages of cell differentiation, with decreased main layer, which leads to the destructive changes in the periodontal complex. Nucleus changes, namely, an increase in its size, can also be associated with the cell life span decrease, so that the cellular composition can have more mature and older cells.

Taking into account the abovementioned, the evaluation of the pathological effect

of COPD on the oral cavity of the patients seems to be timely and important today, and the variety of cytological and immunological signs can serve as early predictors of periodontal tissue diseases.

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MODERN APPROACHES TO OPTIMIZATION OF EDUCATIONAL PROCESS IN THE MEDICAL BIOLOGY, PHARMACOGNOSY AND BOTANY DEPARTMENT OF THE STATE INSTITUTION "DNIPROPETROVSK MEDICAL ACADEMY OF HEALTH MINISTRY OF UKRAINE"

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Annotation. *The article shows methodical methods and organizational forms of the educational process, which are used in the educational and scientific process during the teaching of disciplines to students of such specialities as "Pharmacy" and "Medicine". The article describes the research activities of students, which makes it possible to identify creative abilities and readiness for self-realization; independent work, which is an essential part of the educational process; participation in the training and field practice, which forms general cultural and professional competences in the specialist's professional activities, case study, which actualizes students a certain set of knowledge acquired from other academic disciplines, helps to overcome stereotypes of thinking.*

Key words: *medical education, pharmacy, educational process, teaching practice, teaching methods, case study.*

Changes and transformations, taking place in the conditions of society renewal, put forward new requirements to the content of higher medical and pharmaceutical education in Ukraine, to the quality of professional training of future doctors and pharmacists, require the integration of higher education to the world system while preserving and developing the achievements and traditions of the Ukrainian higher school. One of the tendencies of modernization and development of modern education is transition of educational institutions from the educational process to the scientific one, which allows to organize the research work of students of the higher professional education system in various forms of its manifestation: student scientific societies, elective courses, scientific and practical conferences, solving problem situations during practice and so on. This, in turn, necessitates the development of theoretical and methodological foundations for the formation of an independent, initiative, creatively organized personality which can quickly and flexibly adapt to changes during professional activities, and is also able to professionally self-determine [4, 10, 14].

An important aspect of the pedagogical work in higher education is the formation of professional thinking, the development of professionally significant personal qualities of future specialists. An effective factor at the present stage is the development of students' motivation - the "trigger mechanism" in the learning process, increasing interest in the

chosen profession [10]. Attitude towards learning, as a means of achieving the goal, forms a stable level of the motivational and target basis of training - educational motivation. The structure of educational motivation is multi-valued in content and forms, is made up of students' assessment of various aspects of the educational process, its forms and ways of organization in connection with individual needs and goals [2, 6, 10].

Dominant or subordinate importance has the ability of students to learn, their desire or unwillingness: to get a profession (professional motivation); acquire new knowledge (cognitive motives); benefit society (broad social motives); have high wage (pragmatic motives); assert themselves and to have a certain place in the future in society as a whole and in the nearest social environment (motives of social and personal prestige), thereby determining a certain level of individual achievements in studies, and at the same time determining the degree of approximation to the ultimate goal.

The introduction of science to all spheres of life requires from young specialists not only theoretical knowledge, but also a creative approach to solving problems of various kinds. In connection with this, a modern specialist should possess not only the necessary amount of fundamental and special knowledge, but also the ability to properly assess emerging problems, quickly process existing information, supplement it with missing information, predict the results of professional activity, using his or her intellectual and creative potential [1, 2].

In the Dnepropetrovsk Medical Academy, there is a wide range of organizational forms of the educational process, including lecture, practical, laboratory, seminar classes, term and graduation papers, consultations, training and self-training.

In the Medical Biology, Pharmacognosy and Botany Department, students of such specialities as "Medicine" and "Stomatology" are trained in the first year, studying medical biology; students of such specialties as "Pharmacy" and "Clinical Pharmacy" study the fundamental (biology with the basics of genetics, pharmaceutical botany, including systematics, the fundamentals of biogeocenology) and special disciplines (pharmacognosy, resource management of medicinal plants, pharmacological bases of phytotherapy) during five years, as well as train in the field in pharmaceutical botany in the second year and practice in pharmacognosy in the third year. The main means to increase the effectiveness of teaching students at the department are to involve them in participation in various fields of activity in the university, including research activities, as well as educational work, taking into account the specifics of courses, human resources and social needs.

When studying disciplines, the student acquires not only theoretical knowledge, but becomes an active participant in research activity of the department. The purpose of this work is the acquisition by students of the research skill, which is a universal way of mastering reality. Students, actively participating in research projects and having considerable experience, have more chances of success, both in higher education institutions, and in understanding the material, and using it in practice.

One of the examples of the research work of students in the Medical Biology, Pharmacognosy and Botany Department is the student scientific circle, in which students

combine basic teaching methods (working with scientific literature, preparing abstracts, report, dialogue, practical work) with methodological techniques (slide demonstration, video, macropreparations, micropreparations when considering them under a magnifying glass and a microscope equipped with a camera and further image processing using computer software). The meetings of the circle are held on a monthly basis, with a great deal of attention being paid to developing a plan for the work of the circle by faculty members, who creatively approach to selection of topics for consideration at meetings of the scientific circle, trying to interest and supplement the knowledge of students of various specialties.

Thus, at one of the meetings of the circle, dedicated to the problem of helminthology, medical students, expanding the knowledge of student pharmacists, read out abstracts that examined the morphological features of the structure of the main representatives of flat and roundworms, their development cycles, pathogenetic action, methods of laboratory diagnosis, measures of prevention of helminthiases, and future pharmacists talked about the use of certain medicinal plants (common pumpkin, wormwood, tansy, male fern) having anthelmintic activity. During this meeting, students used various thought operations: analysis, comparison, judgments, conclusions, and teachers helped to select exactly those that were appropriate to apply in each case.

Participation in the work of the circle develops interest in the studied subjects, raises the educational motivation, gives an opportunity to broaden the horizon, creates conditions for social and professional growth, the formation of logical, scientific thinking, the development of interest in the chosen profession. Referential messages contribute to the ability to correctly state their thoughts necessary in future practical activities, which requires not only to carefully listen to patients' complaints, but also to be able to conduct a competent dialogue with them.

In addition to theoretical informative reports, students prepare their publications, take part in student scientific events of various levels (department, faculty, region, national level): scientific conferences, contests of scientific and educational works of students, skill competitions in disciplines and specialties, take care of laboratory animals, participate in the manufacture of macroscopic drugs, and the most active ones take direct part in the implementation of research work of the department guided by a particular scientific advisor from the teaching staff. Scientific results, obtained by students, are published in scientific journals and conference collections in the form of abstracts and articles. Conduct of experimental studies, work with literature, preparation of reports, abstracts and articles, presentations, speaking at conferences, defending own opinion and protecting the research results, develop a creative personality and is a serious experience for students. Thus, the research work plays an important role in the development of creative abilities of students, but requires a constant attention from the teaching staff in order to find new forms of its organization.

High school is dedicated to develop not only professional knowledge, proficiency and skills, but also to promote the formation of a spiritual and moral personality, which is of particular importance for a medical university. The result of training should be

professional competence, which will integrate personal, spiritual and moral positions, as well as professional knowledge, proficiency and skills. It is just that combination of these qualities which will allow the doctor and pharmacist to realize humanistic values, take responsibility for their actions and participate in positive changes [1, 4, 5].

The main structural subdivision of the medical academy is a department, which plays a decisive role in the educational process, since it carries out the educational process, which has the greatest educational potential. It is just that department, especially the graduating one, which forms professional and intellectual competence of future specialists. In our graduating department of pharmacists, upbringing is not the simultaneous transfer of knowledge and value judgments from the teacher to the student, but their interaction and cooperation over the course of five years of training, both in classrooms and during the training practice.

The training and field practice in pharmaceutical botany involves acquaintance of students with various types of plant communities in nature, their general and medicinal floristic composition, peculiarities of their distribution, adaptation to different habitat conditions, significance in nature and people's life, as well as with the developmental features and a sanative role of plants in urbanization conditions [7]. The training and field practice in pharmaceutical botany includes two forms of conduct: field (experimental) and cameral (laboratory). The field form of the training practice includes acquaintance with the flora and plant communities of the region, collection of plants for herbarium. An important component of the experimental stage is performance by students of the independent research work, in particular: collection, drying plant material, mounting and design of herbarium; making herbarium collections "Fruits Classification", "Leaves Variety", "Inflorescences Variety", etc. The cameral form of the training practice includes the morphological description of plants and determination of the belonging of the collected plant to a certain taxon, mounting of herbarium, keeping practice diaries, writing an abstract and compiling a report on practice. The training and field practice in pharmaceutical botany is conducted in the form of thematic excursions with subsequent processing of the material.

The goal of the training practice on pharmacognosy is the formation of the general cultural and professional competencies in the field of professional activities of the specialist that includes practical pharmacy: during practice, students apply the theoretical knowledge, obtained in the department, for preparation, drying, storage, transportation, analysis, processing, application of vegetable raw materials, containing various groups of biologically active substances. They also master the basic methods of collection, herbarization, fixation, preparation for microscopy of plant objects, primary processing, standardization of medicinal vegetable raw materials of various morphological groups (leaves, grass, bark, fruits, seeds, underground organs), fix skills of determining plants, get acquainted with methods of determination of resources of wild medicinal plants in our region on the example of herbaceous, arboreal and shrubby plants. Ecological and morphological study of plants underlies all measures to protect plant objects, harvest medicinal plants, taking into account their rational use and reproduction, forming a

careful attitude to the environment [3, 7, 9, 11].

Methods of cultivation, agrotechnical approaches to cultivation of medicinal plants and care for them, peculiarities of cultivation are mastered by students in the pharmaceutical section of the department, which is one of the bases for conduct of the training practice of students of the second and third years of such specializations as "Pharmacy" and "Clinical Pharmacy". The pharmacopoeial plot was created with the purpose of studying by students of medicinal plants in nature, in which they are represented: male fern (Dryópteris fílix-mas), brandy mint (Méntha piperíta), garden lemon (Melissa officinalis), castor bean (Ricinus commúnis), garden sage (Sālvia officinālis), elecampane (Ínula helénium), creeping thyme (Thýmus serpýllum), common thyme (Thýmus vulgáris), common periwinkle (Vínca mínor), purple coneflower (Echinácea purpúrea), sedge cane (Ácorus cálamus), heart-leaved bergenia (Bergénia crassifólia), great nettle (Urtíca dióica), calendula (Caléndula officinális), wild camomile (Chamomilla recutita), chokeberry (Arónia mitschurínii), cinnamon rose (Rósa majális), common fig (Fícus cárica), marsh mallow (Althaéa officinális), May lily (Convallária majális), etc., having different pharmacological action: anti-inflammatory, anthelmintic, cardiotonic, hemostatic, choleretic, astringent, antiseptic, expectorant, etc. During the training practice, the theoretical material is not learned mechanically by the student, but it is tested in practice and fixed in form of practical skills as a result of observations, analysis, differential diagnosis of medicinal and non-medicinal plants, information retrieval in scientific and methodical literature. In our opinion, attracting students to the research work allows us to study the program material more deeply, it forms professional thinking, develops research skills, which helps to optimize the learning process in general. The environmental knowledge allows the future specialist to integrate the knowledge of theoretical and applied sciences the most effectively for the rational use of natural resources, and also with their help to more effectively form a system of professional knowledge. Herborized medicinal plants and possible admixtures to them, prepared during practice, are used later in the practical classes of the department.

To get acquainted with tropical and subtropical plants, excursions to the greenhouses of the Botanical Garden of the Oles Honchar Dnipro National University are conducted, where students get acquainted with the morphological, ecological and species diversity of vegetation in different climatic zones and countries of the world, with the practical importance of plants, with rare endangered species, edible and medicinal plants, such as: "relic" dawn redwood cone dissected, which was considered extinct, cabbage palmetto (growing on our land in the Neogene period), Manchurian aralia (ferruginous tree), araucaria, Japanese medlar, algaroba, Cyphomandra, mango, guava, feijoa, dates, bananas, avocado, magnolia, rhododendrons, yew, psidium and exquisite tall and low hamerops, flowering eugenia, black pepper, fern palm, exuding smell of jasmine pitosporum and many other interesting and rare species. When students and teachers fall into this world of tropical plants, one does not know where to look first due to such beauty. In the subtropics section, there are magnolia, paper mulberry, carob, laurel, oranges, anonna-cheremoya, fig, eucalyptus, stone oak, camellia, Japanese fillets, an

excellent collection of succulent plants is made. In the world of tropical plants - many kinds of palm trees, for example, the Canary palm, planted in 1926, even before the creation of the botanical garden - the "elder" plant of the greenhouse will soon celebrate its 100th anniversary.

The students get acquainted with the role and characteristics of the development of woody plants in urbanization when they become acquainted with the vegetation of city parks, named after Taras Shevchenko and Lazar Globa, in which more than 70 species of shrub and tree plants grow. In urban areas, during practice, weed is also studied for weed vegetation, biological features and weed adaptation to spreading. More attention is paid to the study of roadside weeds (common dandelion, greater plantain, goose grass, knotgrass, creeping trefoil, blindweed), and actually deserted (woolly burdock, large and small, great and annual nettle, green ginger, horseweed, sweet and common clover), having medical value.

In order to get acquainted with plants typical not only for our region, but also the country, excursions to national parks of Ukraine are conducted, for example, to Sofiyivsky Park, which is also a research institute of the National Academy of Sciences of Ukraine, where students get acquainted with 3,323 species, forms, varieties of local and exotic trees and shrubs. Foreign students from Palestine, Syria, Lebanon, Morocco, Tunisia, Uzbekistan, Israel especially remember the trip to the unique biosphere reserve "Askania-Nova", which was created on the site of the fescue-feather grass steppe, during the vegetation of various feather grass species, reminding them of a rolling sea. The local ecosystem has been untouchable for millions of years, it is the only such steppe site not only in Ukraine, but throughout Europe. In the arboretum "Askania Nova", students had an opportunity to get acquainted with more than 1,000 species of plants of the East and Central Asian, Mediterranean, North American, Euro-Siberian flora.

Excursions to experimental sites and fields of scientific research institutions, engaged in the cultivation of medicinal plants most fully introduce species, used in medicine and other branches of the national economy. Thus, teachers of the Medical Biology, Pharmacognosy and Botany Department during the botanical and pharmacognosy training practices conducted an excursion to the botanical nursery of the research station of the National Academy of Sciences of Ukraine in the village of Berezotocha in the Lubensky District of the Poltava Region, where the priority objects of study were the species listed in the Red Book of Ukraine (bear's onion, mountain arnica, yellow gentian, spring adonis), and species that grow in subtropical climatic zones (treelike aloe, mountain knotgrass, Withania Somnifera, ground lemon, alpine hedysarum, Baikal skullcap, common licorice, spiny eleuterococus, etc.), in general the collection of botanical nursery has 379 medicinal plant species belonging to 66 families. During this trip to the Poltava Region, students visited not only the "living laboratory" for growing and studying the biological features of traditional and new types of medicinal plants, they rested, but also got acquainted with the cuisine, culture and traditions of the Ukrainian people. Having visited the museum of the Ukrainian wedding in the village of Velikie Budishcha - a house that used to be the property of an ordinary village family, where the unique interior

of the courtyard of the traditional Poltava village was preserved, students got acquainted with the wedding decorations of different times, objects of everyday life, embroidered shirts and towels, they bought souvenirs. In addition to visiting the museum, students became direct participants in the theatrical performance - the ceremony of the Ukrainian wedding, where each guest had his own unique role (bridegroom, bride, bridesmaids, mother-in-law, good-mother, etc.). In the entertaining historical and cultural complex on the small village of Proni near Dikanka, which supposedly served as a prototype of what was described by N. Gogol in the story "Evenings on a Farm near Dikanka" students plunged into a rural, soulful atmosphere, experienced traditional Ukrainian hospitality and tasted the culinary treasures of Ukraine, which we are rightfully proud of - the famous Ukrainian borsch, fat, vareniki and dumplings, homemade sausage, homemade roast, potato cakes and benderyki. Joint trips of Ukrainian and foreign students contribute to the strengthening of interethnic relations, create favourable conditions for students in order to communicate outside the classroom, broaden their horizons, and develop a sense of aesthetic perception of the world around them. Teachers of the department unite the educational and cognitive components of the educational process during the practice and try to make them memorable and interesting, consolidating the acquired knowledge, form the norms of correct behaviour, careful attitude to nature and the ability to assess not only the beauty, but also the fragility of the entire ecological system, to which human beings belong themselves.

Any novice specialist, regardless of the specialization and nature of the work, must have fundamental knowledge, professional skills and proficiency of his profile, experience in creative and research activities to solve new problems, experience in social and assessment activities [1, 10, 11]. The necessary experience is formed in the process of independent work of students, which along with the classroom is one of the forms of the educational process and is an essential part of it. The ratio of time, allocated for classroom and independent work worldwide is 1:3.5 and is intended not only for mastering each discipline, but also for the formation of skills of independent activity in the academic, scientific, professional spheres, the ability to assume responsibility, independently solve problems, find constructive solutions [4, 11].

A promising direction in the development of the creative abilities of the personality, which is necessary for a future specialist in medicine and a pharmacist, is problem training, which allows solving non-standard tasks, learning new skills and competences. The main result of this method of education is the formation of professional thinking of students. Problem training is that the teacher does not present the material in ready-made form, but poses problems for the student, prompting them to look for ways and means to solve them. Solving the problem requires the inclusion of creative thinking [10, 14].

One of the new forms of effective learning technologies from the point of view of forming key competencies in the study of medical biology, pharmaceutical botany, pharmacognosy and resource management of medicinal plants is the case study, which is based on the fact that students independently and in the group should analyse the description provided of any real economic, social and medical, everyday, organizational,

managerial or other case, highlight the problem, offer its solution [2, 13, 15]. This meets the requirement of time in preparation of future doctors and the processes of integrating medical education into a single educational space in Europe. When working with a case, students search, analyse additional information from different fields of knowledge, including those, related to the future medical profession. The application of this method in training allows us to shorten the gap between theory and practice, develop cognitive, intellectual activity of students, analytical abilities, and also to develop skills - to assess the situation, choose key information, formulate queries correctly, forecast the ways of situation development, make decisions in conditions of uncertainty, criticize, respond constructively to criticism, ask questions. The case method provides high efficiency of training and development of future specialists, reducing the number of "passive" and insecure students, forms certain personal qualities and competences, enables the teacher to improve, think differently, act, renew own creative potential. The method used is based on the unity of the didactic principles: the individualization of the approach to each student; sufficient number of demonstrative materials; freedom in learning; formation of skills of independence, self-organization, ability to work with information; highlighting the main provisions of a large volume of theoretical material; development of positive and necessary for further improvement qualities of the future qualified employee [15, 16].

This method is used in teaching students of medical and pharmaceutical specialties [6, 8, 12, 16]. The teacher divides students into microgroups (teams), 5 persons in each are assigned a captain - a student, who takes responsibility for making a team decision. The leader of each team receives a briefcase and a list of recommended literature, after studying which and discussing with the team, students are able to voice the solution of the problem (issue). In the practical class, "Hereditary Diseases" in medical biology, students after the study of the case should diagnose certain syndromes: Edward's, Down's, Patau's, Klinefelter, Pradera-Willi, Wolf-Hirschhorn and others. For the diagnosis of chromosomal diseases, students should:

1. To determine the clinical picture of this anomaly after visual examination of photographs of people with certain chromosomal diseases and their description.

2. To apply genetic methods of research, in particular:

а) karyotyping - for the study of chromosomes in peripheral blood lymphocytes according to micropreparations with the subsequent making of karyotype;

б) dermatoglyphics - to study features of skin fingerprints (dactyloscopy), palms (palmoscopy) and soles of the feet (platoscopy), on the basis of which the diagnosis is established.

3. To characterize a chromosomal or genomic mutation (aetiological principle):

а) individuality of the anomalous chromosome or its site;

б) type of mutation (monosomy, trisomy, polysomy, full or partial)

в) degree of mosaicism of the organism;

г) genotype of the organism;

д) influence of environmental conditions (embryonic or postnatal).

After discussion of the case material by all the students, the captain makes the only correct decision - determines the syndrome, while students actively express their thoughts and argue the result. As a task, the teacher offers students to prepare a presentation on this syndrome for the following session.

The case method is also used during training of students of pharmacists [17]. For example, in order to determine the species affiliation of plants, a set of diagnostic features (features of the root system, morphology of the stem, leaf, inflorescence, fruits) for which they classify the herbarium sample provided to students in a practical lesson on pharmaceutical botany. In classes on pharmacognosy, with the help of prepared cards with chemical formulas of the main groups of biologically active substances, medicinal forms of phytopreparations, herbarium specimens of medicinal plants and medicinal plant raw materials, students construct logical series by logical inferences and comparisons: drug raw materials (grass, fruits, flowers, etc.) → production plant → group of biologically active substances → pharmaceutical activity → herbal formulation. They also offer raw materials with identical (similar) pharmacological action, find the herbarium sample of the plant, impurities to it.

Using the method case in the process of training of future doctors of pharmacists in our department stands out among other teaching methods in that it updates students with a certain set of already acquired knowledge from other academic disciplines, helps overcome stereotypes of thinking, and the teacher does not simply state the material, but poses the problem, formulates a cognitive task, and then, revealing the system of evidence, comparing points of view, different approaches, helps students to find a way to solve the set back task and search ways of this method.

Training of highly qualified specialists, who are ready to carry out their professional activities in a high-tech, competitive world, capable of solving problems, arising in any kind of professional activity, requires extensive use of active and interactive teaching methods in the educational process. In all fields of medicine and pharmacy, specialists are in demand, which are able to work effectively in a team, generate ideas and develop technologies for their implementation, active people are required, thinking and being able to analyse large amounts of information. The task of the teacher is to bring the learning situations closer to the future professional activities of a doctor and pharmacist.

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EFFICIENCY OF SURFACE ENAMEL MINERALIZATION OF PERMANENT TEETH AMONG CHILDREN FROM DIFFERENT AGE GROUPS

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Annotation.*Comparison of the microscopic pattern of the control (without remineralization therapy) and the study groups (with remineralization therapy) has found that at the initial stage of the secondary mineralization analyzed parameters were not statistically different, which is obviously due to the fact that the effect of the «Tooth Mousse» appears not directly, but in the remote period of time which coincides with a period of enamel stabilization during the completion of the intensive phase of secondary mineralization. The registration of positive dynamic microscopic changes in the parameters of heterogeneity, maturity / brilliance and abrasiveness / smoothness of the enamel surface substantiate the expediency and effectiveness of the implementation the schemes for carious pathology prevention in the early stages of secondary mineralization (immediately after eruption) and throughout the period of its intensive phase, which subsequently contributes to stabilization of caries-resistant enamel structure of the teeth.*

Key words: *secondary mineralization, permanent teeth among, children from different age groups, remineralizationtherapy.*

Introduction. The immature condition of teeth enamel, which is characteristic for the period of the first few months after their eruption, is characterized by an increased risk of developing caries, especially under conditions of realization of insufficiently controlled prevention programs [1, 2, 3, 4]. Ensuring conditions for the full realization of the secondary mineralization process is one of the determining factors for the formation of adequate parameters of caries resistance in the child, otherwise, the growth of the caries vulnerability parameter is noted, which in the future leads to an increase in the caries intensity indices with age [3, 4].

The teeth enamel after their eruption differs from its ultimate mature structure by high content of the organic component and water, which in turn determines its high permeability to the substances from the oral cavity [5, 6, 7]. Thus, the enrichment of the enamel structure by inorganic constituents (calcium, phosphorus, fluorine) will contribute to stabilizing its composition, reducing permeability, changing the microrelief with the decrease in the number of fissures and the size of micropores.

According to Khmel O.V. and Kaskova L.F. (2017), the secondary mineralization period is most suitable for carrying out procedures of remineralization therapy in the structure of preventive measures aimed at preventing the development of carious pathology. The procedures of remineralization therapy, in the opinion of the authors, should begin immediately from the age of 6, that is, actually from the moment of eruption

of the first permanent teeth, by enriching the enamel structure with the components of calcium and phosphates with the obligatory subsequent introduction into the prevention program of fluorine-containing preparations contributing to a decrease in the enamel permeability [8].

Laboratory examination of the structure of the enamel surface layer with the help of modern diagnostic methods and comparison of the obtained results under the conditions of induction of the secondary mineralization process with the help of various remineralising preparations and the action of the accompanying factors will contribute to the optimization of the caries prevention programs in children of different age groups [1, 2, 4].

Research objective. To analyze the efficiency of mineralization of the surface area of teeth enamel on the basis of microscopic differences of its surface in different age periods and under the condition of remineralization therapy.

Materials and methods of research. Samples of dental cuts for microscopic examination were obtained from units of the dentition (premolars), which were extracted with orthodontic indications. The criterion for the inclusion of teeth as investigated objects in the structure of the study was the absence of visually expressed carious lesions. At the same time, in the group under study the teeth were selected that have been extracted according to orthodontic indications in persons who received remineralization therapy during the first six months aftereruption followed by reminiralization therapy every six months (Tooth Mousse, applications 1 time per day for 2 weeks [9]) and appropriate monitoring, and in the control group - teeth, extractedin children, which hadn't undergone any preventive remineralization measures. The premolars in each of the studied groups were obtained from children aged 11-13 (8 teeth), 13-15 (8 teeth) and 15-16 (9 teeth) (25 teethtotal). The design of the study was formed in the same way as the design described in the study of Sorochenko V. (2016) [10].

The choice of the age parameters within which the enamel surface composition was studied is justified by the sequence of the secondary mineralization process, since immediately after eruption, the contact between the tooth and the environment of the oral cavity occurs and due to the direct action of the saliva, the mechanism of the beginning of secondary mineralization is realized; during the next two to three years the process of active secondary mineralization takes place, which after the above-mentioned period is characterized by a decrease in the intensity and stabilization of the existing enamel structure with a characteristic degree of caries resistance [11, 12, 13, 14].

After removal, the segmentation of the teeth was performed with separating the crown structure and further polishing the crown with the use of polishing brushes without the use of pastes. The cuts were formed from the vestibular teeth surface with a thickness of 0.3-0.5 mm using a diamond disc. The procedure for treatment of the formed enamel samples provided for their purification and degreasing followed by study in a polarized-light microscope (Optika B-150POL-B 40x-640x Bino) with a 500 times magnification. The microscopic pattern of the enamel surface was describedby such parameters as surface heterogeneity, mattiness / surface gloss, roughness / surface smoothness. The

relative level of surface homogeneity was assessed by calculating the ratio of identified surface sections that visually differed in their texture to the overall texture of the enamel surface, which was characteristic of the major surface of the enamel under examination [15].

The analysis, processing and systematization of the results were carried out in Microsoft Excel 2016 tab editor (Microsoft Office, 2016).

Research findings and their discussion. During the conducted laboratory study it was possible to identify characteristic microscopic differences in the structure of the surface layers of theenamel, they were dynamic and differed in different periods of age development, as well as depending on the fact of carrying out remineralization therapy using the Tooth Mousse gel. In the structure of the samples formed of premolars in children aged 11-13, who hadn't receivedremineralization therapy, a significant number of cracks on the enamel surface, visualization of the extended areas of the enamel prism cropout, the surface color was matte, dull with a pronounced Simbol de basa - rugozitate. png surface roughnesswere foundduring microscopic examination. The relative average surface homogeneity ratio didn't exceed 32.18%.

In the same age group in the structure of samples that were formed of teeth in children, who have receivedremineralization therapy immediately after eruption and during the monitoring period, a significant number of enamel cracks and irregularities were similarly observed, but relatively lower compared to the control group. In addition, in the structure of the total area of roughness of the enamel, spots with a high degree of smoothness were found that were optically less matted. The above features contributed to the achievement of a relative average level of surface homogeneity at the level of 40.14%.

When studying samples formed of teeth in children aged 13-15, which haven't receivedremineralization therapy, it was found that in comparison with the control group of children aged 11-13, the number of visually visible cracks in the enamel structure and the total number of surface irregularities progressively decreases, whileonly separate large areasof surface irregularities were found. The areas of pronounced roughness alternated with the areas of visualized smoothness, which in turn contributed to the visual alternation of the matte and shiny areas of the enamel surface. Therelativesurfacehomogeneitylevel increasedto 55.19%.

In the studied group of samples formed ofextracted teeth in children aged 13-15 who received remineralization therapy, it was found that the relative average surface homogeneity level reached 64.55%, and given its prevalence in all the samples studied, it can be concluded that the difference between indicators of the relative level of surface homogeneity in the control and study group are statistically significant ($p < 0.1$). Separate large areas of the enamel surface irregularities in the study group, unlike the control group, were not found. The test and control samples in this age group did not differ Visually, in terms of mattness and roughness parameters.

In the age group of 15-16, in the structure of samples formed of teeth in children whoreceivedremineralization therapy, it was found that the total number of cracks

decreased to some (up to 6-8 in the eyesight), also single dim spots were found on the enamel surface, all the rest of the surface was uniformly shiny and smooth, with the exception of individual small rough areas. In the same age group, the samples of the study group were characterized by less number of cracks in the eyesight (up to 4-5), more pronounced indicators of the enamel shine and the smoothness of its surface, areas of increased roughness were identified weakly (less than 5%, therefore, they can be neglected) or they were absent at all. The relative level of surface homogeneity in the control and study groups was 80.25% and 88.13%, respectively.

The systematization of the results of microscopic analysis of control and test samples of teeth enamel in different age periods is presented in Table 1.

Table 1

Results of analysis of control and test samples of teeth enamel in different age periods

	11-13 years		13-15 years		15-16years	
Agegroup / studied parameters	Withremineralizationtherapyaftereruptionandduringtheobservationperiod	Withoutremineralizationtherapyaftereruptionanddduringtheobservationperiod	Withremineralizationtherapyaftereruptionandduringtheobservationperiod	Withoutremineralizationtherapyaftereruptionandduringtheobservationperiod	Withremineralizationtherapyaftereruptionandduringtheobservationperiod	Withoutremineralizationtherapyaftereruptionandduringtheobservationperiod
Surface irregularity parameters	Smallernumber of pronouncedcracks, thareasofcropoutofenamelprisms, relativeaveragesurfacehomogeneityis 40.14%.	Significantnumberofpronouncedcracksandirregularitiesoftheenamel, areasofcropoutofenamelprisms, relativeaveragesurfacehomogeneity is 32.18%	Thenumberofcracksdecreases, theareasofcropoutofenamelprismsarealmostnotseen, therelativeaveragesurfacehomogeneitylevelis 64.56%.	Thenumberofcracksdecreases, somelargeareasofsurfaceirregularitiesareseen, the relativeaveragesurfacehomogeneityis 55.19%	Singlecracks (average 4 to 5), therelativeaveragesurfacehomogeneityis 88.13%	Singlecracks (average 6 to 8), the relativeaveragesurfacehomogeneityis 80.25%
Surface mattness / gloss	Matte	More matte (dull) surface colour	Alternating matte areas with gloss	Alternating matte areas with gloss	Uniform enamel gloss	Uniform enamel gloss (single dull areas)
Surfaceroughness / smoothness	Thesurfaceroughness islesspronounced	Significantsurfaceroughness	Alternating roughareas-withoccasionalsmooth	Alternating roughareas-withoccasionalsmooth	Pronouncedsurfacesmoothness	Pronounced-surfaces-moothness-withsingle pronounced-roughnesses

Thus, we can establish the fact of the dynamic change in the microscopic parameters of the study of the enamel surface in different age periods corresponding to the beginning, the intensive phase and the end of the secondary mineralization period. The tendency of changes is characterized by a decrease in the total number of irregularities of the enamel surface, an increase in the shine and smoothness indicators with the approach to the stage

of stabilization of the structural composition during the period of 15-16 years. When comparing the microscopic presentation between the control (without remineralization therapy) and the study group (with remineralization therapy), it was found that the initial stages of secondary mineralization the parameters compared do not differ statistically, which is obviously due to the fact that the effect of Tooth Mousse preparation does not manifest itself directly, but in some period, which coincides with the period of enamel stabilization at the completion stage of the intensive phase of secondary mineralization. The pronounced microscopic changes between the study group and the control group of samples are observed in the age range of 15-16 years, where the difference in the relative average level of surface heterogeneity is statistically significant ($p < 0.1$), as well as statistically different from similar indicators recorded in age periods of 11 -13 and 13-15 years ($p < 0.1$) (Figure 1).

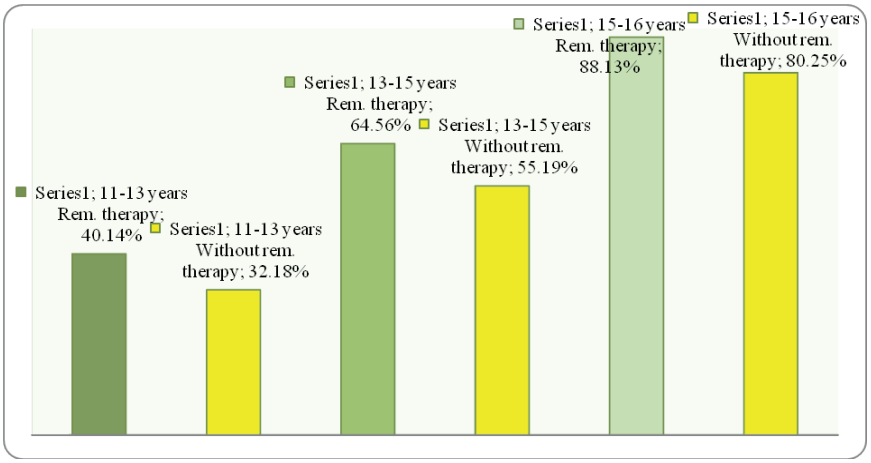

Fig. 1.Distribution of the results of analysis of the relative average level of heterogeneityof the enamel surface in different age groups [Developed by author]

In a similar study of Sorochenko V. (2016) with the useof scanning electron microscopy and X-ray photoelectron spectroscopy methods it was also proved that remineralization measures (including the use of Ftorcalcit E for deep fluorination) facilitates deposition of additional chemical compounds (calcium fluoride) on the enamel surface [16]. The author also noted that the retention of such compounds was observed after mechanical and ultrasonic examination of enamel samples during their preparation for the study. Similar results were obtained by Khomenko L.A. (2015) using R.O.C.S.® Medical toothpaste with a fluoride content of 5000 ppm [2] and a Tooth Mousse water-soluble cream containing 10% of casein phosphopeptide-amorphous calciumphosphate[12].

In addition, in a study by Kunin A. (2013, 2015), it was noted that the surface layer of enamel contains the largest share of calcium and phosphorus percentagewise corresponded to 39.83 ± 0.14% and 18.53 ± 0.08%, while similar indicators were somewhat lower in

the middle layer of the enamel and on the face of the amelodentinaldentine junction, they corresponded to 39.53 ± 0.13% and 18.16 ± 0.07%; 39.07 ± 12% and 17.92 ± 0.07%, respectively [3, 4]. Such a distribution of mineral components may indicate a higher deposition ability of the surface layers of the enamel, and the dominant role of their variational structural changes in the development of carious lesions.

The obtained facts provide a sufficient basis for realization of schemes for the prevention of the carious process development in the early stages of secondary mineralization and during the entire period of its intensive phase, ensuring the stabilization of the caries resistance of the enamel structure at the time of completion of the active period of the permanent teeth mineralization process.

The limitations of this study are that the analysis was conducted only on premolarteeth samples extracted by orthodontic indications. It is obvious that for a broader understanding of the remineralization process, it would be advisable to carry out research with the verification of the dynamic parameters of the secondary mineralization of all teeth, starting from the moment of their eruption, and providing monitoring until the completion of the active phase. However, the selection of premolars as test samples is based on approaches to the extraction of these teeth during the correction of orthodontic disorders, taking into account the corresponding indicators of their functional significance [16, 17]. In addition, it is obvious that the pattern of secondary mineralization occurs in all teeth in a similar way, and its major changes relate more to the age period parameter rather than the topography criterion.

Conclusions. During the study of microscopic changes in the surface area of premolars in different age periods, it was possible to establish the fact ofdecreased total number of enamel surface irregularities, and increased shine and smoothness indexes when approaching to the stage of stabilization of the structural composition during the period of 15-16 years. In the same period, there were pronounced microscopic differences between the test (with a remineralization therapy using Tooth Mousse gel) and a control (without remineralization therapy) groups of surface enamel samples, the difference between which according to the indicators of the relative average level of surface heterogeneity was statistically significant ($p < 0.1$), and also statistically different from similar indicators registered in the age groups of 11-13 and 13-15 years ($p < 0.1$). The obtained facts substantiate the expediency and effectiveness of the schemes for the prevention of carious pathology in the early stages of secondary mineralization (immediately after eruption) and during the entire period of its intensive phase, that further contributes to the stabilization of the caries-resistant structure of the teeth enamel.

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GEOLOGY

INFLUENCE OF CATAGENESIS ON THE TRANSFORMATION OF SANDSTONE POROSITY OF THE DONETSK BASIN

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Annotation. *The results of studying of the sandstones porosity transformation under conditions of catagenesis and tectonism are presented. Particular attention was paid to the transformation of closed porosity of sandstones. The presence of a large number of micropores in quartz grains of sandstones made it possible to distinguish a particular type of closed porosity. It is proposed to divide closed porosity of rocks into cement-closed porosity and grain-closed porosity.*

Key words: *porosity, catagenesis, gas inclusions, microcracks, Boehm strips.*

Introduction. During determining the potential oil and gas reservoirs, and predicting gas burst phenomena in mine workings, porosity of rocks is one of the necessary parameter that must be taken into account.

The study of this parameter on the example of the Donetsk basin deposits is an essential task because it is a perspective area for extracting coalbed methane in the terms of energy resources concomitant.

According to the scientists' point of view, the Donetsk Basin should be considered as a coal gas deposit with complex exploitation to reduce gas emissions into mine workings and obtain unconventional type of gas materials at an industrial scale as well [1, 2].

The main collectors of free gas in the Donets Basin are sandstones. They are associated with gas accumulations of industrial significance and the numerous micro accumulations of free gas. Despite this, the gas production is associated with a number of difficulties. The complex mining and specific geological conditions of basin deposits had a significant impact on decreasing porosity of sandstones.

The aim of this article is to consider the main types of sandstones porosity, as well as their changes, depending on the catagenetic transformations and tectonism.

Main part. Rock porosity is the amount of syngenetic (primary) and epigenetic (secondary) cavitations. It can be divided into the absolute porosity (a total volume of all cavitations irrespective of their shape, size and relative position), the open porosity (the complex of interconnected set of pores and cavitations, the volume of the porosity where the movement of liquid and gas under specific temperature and pressure is possible), and closed porosity (the complex of closed and isolated pores).

As for the conditions of the Donetsk Basin, the scientists focused their attention on investigating absolute and open porosity of the sandstones first of all to predict rocks outburst. These parameters were studied depending on the genetic characteristics of sandstones, mineralogical and structural transformations, catagenetic influence and basin tectonics.

The general regularity of decreasing sandstone absolute and open porosity due to increasing catagenesis grade was determined in all areas of the Donbas. The most intensive decrease in the values of absolute and open porosity is typical for sandstones of early stage of catagenesis. With each subsequent sub-step transformation the range of open porosity changes is significantly reduced. This is due to the fact that increasing transformation degree causes rocks to consolidate and leads to decreasing the volumes of their pore space (Fig.1).

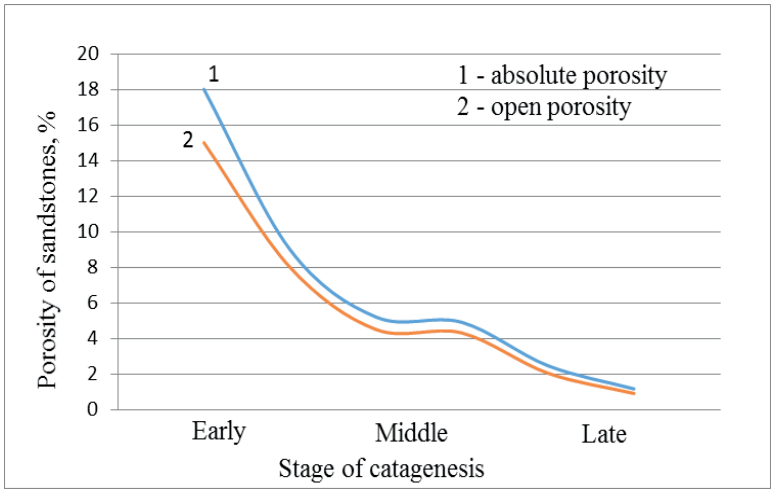

Fig. 1 Changing the value of absolute and open porosity with increasing rocks catagenesis stage [1]

Regional tectonic processes forming the modern structural plan of the Donetsk Basin had significant impact on the change of reservoir rock properties. Moving from peripheral areas to the central part of the basin such cases as increasing volume density and decreasing open porosity of one lithogeneous type of the sandstones are observed. The sandstones in the central area are the most consolidated and have the lowest values of porosity and permeability [3], (Fig. 2).

Thus, such three factors as: the formation conditions defined by sandstone lithogeneous type, rocks paleodepth estimated by adjacent coal grade and tectonics characterized by sandstone position in a various structural zone had a significant impact on changes absolute and open porosity. Previously established regularities of transforming absolute and open porosity of sandstones are of great practical importance, and are the bases for further studies of reservoir rock properties.

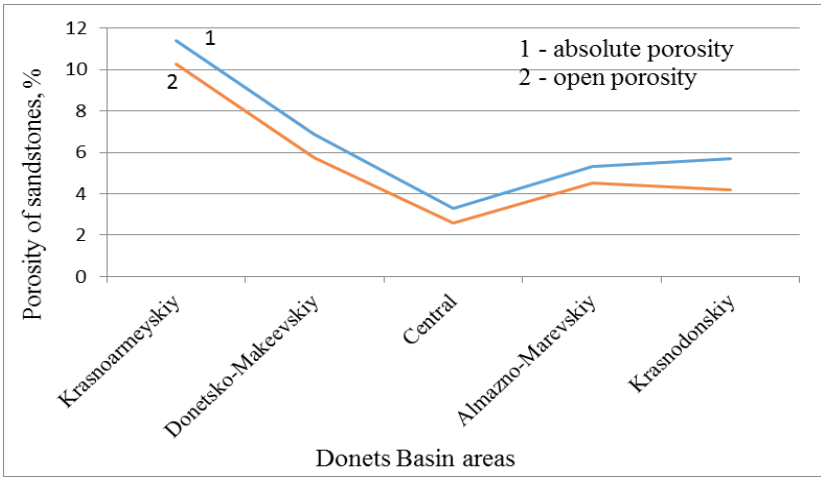

Fig. 2 Changing the value of sandstones absolute and open porosity depending on regional location in the basin [3]

There was not enough attention to the research of closed porosity in conditions of the Donets Basin. The given task was considered not to have practical or scientific interest because of the absence of possibility to provide the movement of liquids and gases within the closed porosity.

Usually, by the term "closed porosity" is meant that volume of closed voids, which is contained in the cementing matter of the rock. This parameter is determined as the difference between absolute and open porosity and as a rule does not exceed 1-2 %. Obtaining the value of closed porosity by calculation we can define the general tendencies of the index changes.

The disadvantage of determination the closed porosity by the calculation method, as the difference between absolute and open porosity, is that we only get the values of the volume of pores that is contained in the cement of the rock. However, a significant amount of gas inclusions in clastic grains of rocks is the part of closed porosity too.

During the investigation of thin sections of sandstones under an optical microscope at large magnification (from 1000 to 1200 times using an immersion liquid) we can notice numerous inclusions in quartz grains of sandstones. It was established earlier that the gas in these inclusions is represented to a greater degree by methane (~ 60%), carbon dioxide (~ 30%) and nitrogen (~ 10%), [4]. We can observe singular gas inclusions (primary inclusions), (Fig. 3A) or gas inclusions that fill the microcracks of the grain, thereby forming a strips of Boehm (Fig. 3B).

Boehm strips are microstructural deformations of sandstone quartz grains decorated with gas inclusions. They are of particular interest because previously their formation was proved to occur during rock catagenesis directly in the conditions of the Donetsk Basin unlike the single gas inclusions formed in the source rocks [4]. The prevailing development of Boehm strips in sandstone quartz grains is explained by increased gas

content formed during the process of coal carbonization and dispersed organic matter in sedimentary rocks. Singular gas inclusions and Boehm strips are observed throughout the sandstone quartz grains of early and middle stages of catagenesis.

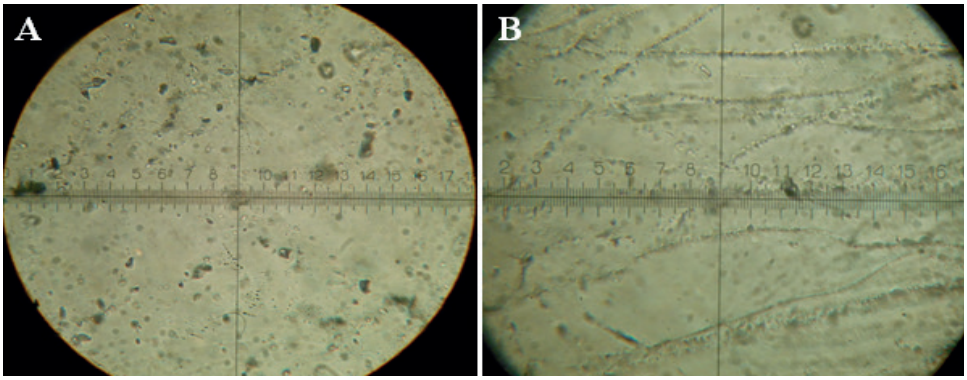

Fig. 3. Thin section of sandstone l31Sl5, mine named after A.G. Stakhanov (Donetsk Basin), depth selection 794,0 m:
A – singular gas inclusions in quartz grains, magnification 1200^{x}; B – Boehm strips in quartz grains, magnification 1200^{x}

Taking into account the considerable amount of gas inclusions in clastic grains of rocks and the necessity of their detailed investigation, it was proposed to divide the closed porosity into the cement-closed porosity (the volume of closed porosity contained in the cement-grouted rock material) and grain-closed porosity (the volume of gas inclusions in clastic rock grains).

The study of grain-closed porosity has a certain practical interest. First of all, during the transformation grains along the dislocation zones, gas can migrate from microdeformations into open pores and cracks, as a result of which the volumes of gas in rock cement and intergranular space increase. The second important practical interest is that inclusions represent a potential threat, since the pressure in the inclusions can reach 500 MPa [5]. At a significant pressure and volume inclusions can act as an additional impulse of gas-dynamic phenomena in the rock massif.

Considering the scientific and practical interest of the grain-closed porosity study, it was formulated a task to establish the basic patterns of variation of this parameter depending on the degree of rock transformation (catagenesis). The developed method of counting the volume of gas inclusions made it possible to establish additional volumes of gas, which is enclosed in quartz grains of sandstones.

To examine the grain-closed porosity, thin sections of sandstones were used. Samples of sandstones were taken in several mining areas of the Donetsk basin (Krasnoarmeysky, Almazno-Maryevsky, Dolzhano-Rovenetsky). These areas contain sandstones of all stages of catagenesis, from early to late, which allowed making a comparative analysis of the effect of the stage of catagenesis on the transformation of gas inclusions. The

study was carried out using a POLAM R-111 microscope at magnifications from 1000-1200 times using an immersion liquid.

During the study of thin sections of sandstones, emphasis was placed on the inclusions that decorate the Boehm strips. As mentioned above, they occurred during rock catagenesis directly in the conditions of the Donets Basin unlike the single gas inclusions formed in the source rocks

On average, the size of gas inclusions in quartz grains of sandstones varies from 1 to 3 μm. With an increasing of the catagenesis stage, the size of the gas inclusions decreases. This indicates that division of the inclusions to the smallest size (Fig. 4) occurs with an increase of pressure on the rocks. By division, the inclusions adapt to the conditions of rock location.

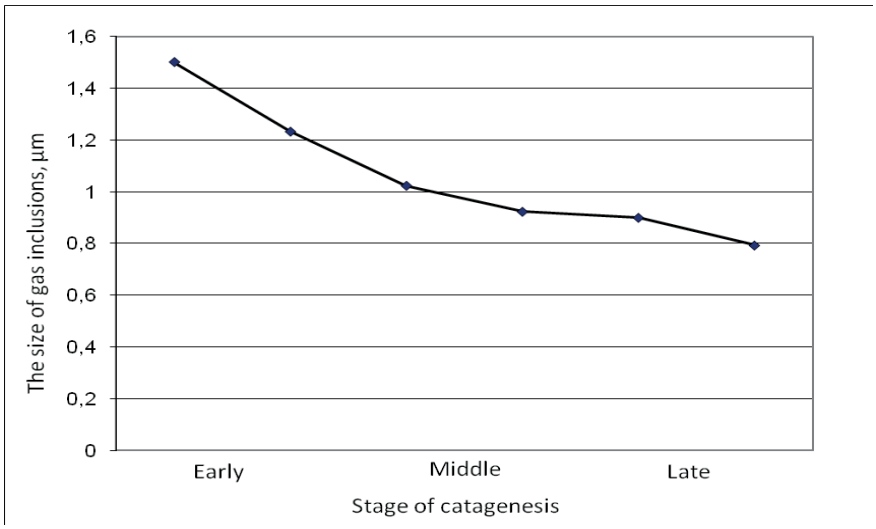

Fig. 4. Influence of the catagenesis stage on the change of size of gas inclusions in quartz grains of sandstones

The method of counting the volume of gas inclusions made it possible to determine the amount of gas in the quartz grains of the sandstones of the Donetsk basin. It has been established from 1 to 4 % of gas in quartz grains of sandstones. These data is averaged since a microscope magnification of 1200 times allows us to observe inclusions with a minimum size of 0.3 μm. The study of sandstone sections under larger magnifications would allow us to see more inclusions and thereby supplement the data. In addition, considering pressure under which these inclusions are located, it can be assumed that gas volumes can be much larger. As the stage of catagenesis increases, the volume of gas inclusions decreases. The greatest volumes of gas inclusions are characteristic for the middle stage of catagenesis.

The volume of gas inclusions must also be taken into account during the determination of the collector properties of rocks. Determining the absolute porosity in laboratory

conditions, it is necessary to grind the rock to the size that would allow revealing the smallest inclusions in the rock-forming grains. Part of the gas contained in the rock-forming grains will substantially supplement the data of absolute porosity of the rocks.

Conclusions. The processes of catagenesis and tectonics play an important role in the transformation of the sandstones porosity. With the increasing of the catagenesis stage and tectonic stress, the sandstones become denser, which leads to a decreasing of their pore space. In addition to absolute and open porosity, closed porosity is also transformed. Closed porosity of rocks can be conditionally divided into cement-closed porosity and grain-closed porosity. The study of grain-closed porosity of rocks has a certain scientific and practical interest. When the grains are disrupted along dislocation zones that are filled with gas inclusions, some of the gas can pass into the free phase, into the communicating pores and cracks thereby increasing the free gas parameters in the rock. It can also be the reverse process, when as a result of the gas-bearing rock consolidation, part of the gas passes from the open pores into microdeformations of clastic grains, thereby forming the Boehm strips. Thus, it is possible to talk about changes of gas location forms depending on the conditions in which the rock is located. The developed method of counting the volume of gas inclusions made it possible to determine the amount of gas in quartz grains of sandstones. These volumes are additional and should be considered during the determination of the reservoir properties of rocks. Considering that the gas in the inclusions is under high pressure, they can act as an additional impulse of gas-dynamic processes in the mine workings. It must be taken into account predicting this phenomenon.

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HISTORY

PHENOMENON OF THE UKRAINIAN ORTHODOX CHURCH HIERARCHY OF THE 17TH AND 18TH CENTURIES

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Annotation. *This state examines intellectual potential and characteristic features of the spiritual world of the Ukrainian bishops who lived in the 17th and 18th centuries, as well as their implementation in ecclesiastical, cultural and educational activities of the reverend fathers. The auther states that judged by its educational and scientific level, evangelical and literary work the Ukrainian Orthodox Church hierarchy, which has been shaped by the Kyiv Academy, created a great phenomenon in the early modern his-tory of Ukraine.*

Key words: *Ukrainian Orthodox Church, Orthodox hierarchy, Kyiv Academy, Educational activitiy.*

The life and creative legacy of Ukrainian Orthodox Church hierarchs of the 17th and 18th centuries have been the subject of scientific interests of researchers from different fields – secular and clerical historians, philosophers, hierologists and literary scholars [2 -5; 16; 17; 20]. However, the historiographical discourse on the topic, although all-round and rather comprehensive, has often been inconsistent. Biographical research into lives of some church leaders who wore pontifical vestments is extremely disjointed, the existing studies lack comprehensiveness, and some of them rely on stereotypic preconceptions. This has brought about the need to do a synthetic interdisciplinary scientific research that would include a thorough analysis of the contribution made by the Ukrainian church hierarchs to Ukrainian and world heritage.

The research into the Ukrainian hierarchs' educational and intellectual level, as main representatives of Ukrainian culture that times [7; 11; 13; 14; 15; 18; 19] reveals that it is consistent with high European criteria. During their formative years, personality of the would-be hierarchs as highly educated elite of the time was shaped by the Kyiv Academy education system with its advanced methods of teaching [1; 6; 8; 14]. Intellectual development of the future bishops was greatly promoted by years of stud-ies in the European educational institutions which shaped their new worldview, al-lowed them to implement the obtained social skills and competences, knowledge of foreign languages and first-hand intellectual experience in their subsequent educational an scientific activities.

Analysis of the Ukrainian church hierarchs' activities on their way to the pontifical office revealed the main areas where they put their intellectual potential to use: teaching, preaching, literary work, translation, book proofreading and editing. For the would-

be hierarchs the most attractive and promising occupation was teach-ing at the Kyiv Academy: more than one fourth of them (28 persons) worked there as teachers, 9 made it to the position of Principal and 14 – to the position of Prefect [1].

One of the most representative manifestations of the Ukrainian Orthodox Church hierarchs' intellectual potential was the size and the contents of their private book collections. Catalogs of books wich belonged to Ukrainian bishops in the 18th century provide strong evidence that despite the presence of liturgical books in Slavonic language, which were needed for religious rites and church administration and management activities, considerable number of the books were the works by Catholic authors from Western Europe and Poland written in Latin or Polish. Especially impressive, as far as the number of books in Latin is concerned, were collections of the hierarchs of Ukrainian origin who were conducting their ecclesiastical activities in Russia: Feofan Prokopovych, Feofilact Lopatynskyi, Symon Todorskyi, Stefan Yavorskyi, Kyrylo Liashevetskyi, Lavrentii Gorka and others. Contents of the libraries reflected creative interests and needs of their owners, first of all as authors and translators. The major part of these books were the works by Catholic authors from Western Europe and Poland written in Polish and Latin, homilectical literature of Polish preachers and theologists, works by German pietists, books by Protestant authors. It was due to high level of education at the Kyiv Academy. Book collections of the Ukrainian church elite included a large number of works which were secular by nature, in particular works by ancient historians and Italian humanist thinkers.

Motivation of the Ukrainian bishops' spiritual ministry, their vision of their vo-cation and their place in society, spiritual and intellectual priorities, as well as their worldview revealed unique features of their intellectual world. The prism of personal views of the Ukrainian bishops obtained by analysis of the existing documents demonstrated a peculiar program of their archflamenship. Following Petro Mohyla's directions, they understood that their main mission was to spearhead apostleship, to be zealous enlighteners, active proselytisers of Christian values, examples of pastoral ministry and moral virtues for the society. Majority of bishops considered themselves to be the upper stratum which is out of the secular authorities' control. Feofan Pro-kopovych had his own opinion on episcopality. He claimed that in the social hierar-chy the bishops had to be fully subordinated to the secular authorities.

Among the main worldview and philosophical values of the Ukrainian hierarchs were the following: humanism, anthropocentrism, orientation on perfect personality. In their philosophical and ecclesiastical works the church leaders – alumni and profes-sors of the Kyiv Academy, scholars of Chernihiv branch - furthered the ideas of a perpect personality that had to be wise and compassionate for the purpose of achiev-ing common good. An important contribution of the Ukrainian clerical elite was the teaching about intellect, interrelations between intellect and spiritual betterment of humankind. This ascertained their perception of themselves as intellectual elite of the society.

We should not forget about the extremely important activities of the Ukrainian bishops aimed at education of the Ukrainian people. These activities have their source in

consistent policy of the Kyiv Academy. In accordance with tradition which can be traced back to Petro Mohyla, the heads of Metropolitan Archdiocese of Kyiv were benefactors of the Academy. They oversaw the teaching process, addressed legal is-sues, monitored financial situation; they were the first to come to the rescue when the help was needed. Their example was followed by the heads of Chernihiv, Kharkiv and Pereiaslav dioceses, which launched and supported their own schools and colleges. Thanks to their ktetors, they served not only as educational centers, but also as prom-inent cultural hubs around which the entire Ukrainian clerical and secular elite rallied. That is why the Ukrainian bishops' activities played such an important role in consol-idation of the Ukrainian people which was gaining momentum while national elite was either missing or incapable under Russia's centralizing regime.

The bishops from among Kyiv academicians initiated missionary outreach in the Russian Empire, thus implementing the program of Peter the Great which was aimed at converting to Christianity and colonizing numerous native peoples. They became heads of the most important ecclesiastical missions in the Volga River basin, Siberia, Kamchatka and the Far East regions, as well as in China and Mongolia. These mis-sions conducted their activities in extremely difficult conditions of confrontation with local population and lack of finance. Missionary and outreach activities of the Ukrain-ian bishops contributed to furthering cultural development and education in the re-gions converted to Christianity. The important result of these activities was the for-mation of the corresponding spiritual needs and compilation of the program of ethno-national enlightenment of the newly converted peoples.

The Ukrainian bishops have created and developed the school of canonical preaching on the territories of Ukraine, Belarus and Russia, which, in the process of its evolution, defined the main directions of the early modern time art of elocution – sermons of "Greek-Slavic", "Latin-Polish" and "publicistic" types. By preaching and speaking out on social and political issues, the hierarchs greatly influenced the society, shaping its worldview and teaching it moral and ethical lessons.

Circumstances that forced the Ukrainian hierarchs to provide spiritual guidance in Russia defined the role of Ukrainian Orthodox Church hierarchy as the Russian Em-pire's great civilizing factor. Being part of the Russian Orthodox Church hierarchy since the time of Peter the Great's reign, representatives of Ukrainian clerical elite were the bearers of the Western, European civilization in their pedagogical, translation and evangelical work. The seats of the Ukrainian bishops both in Russia and in Ukraine served as places where Ukrainian elite rallied and from where, based upon advanced Ukrainian evangelical tradition instilled by Kyiv Academy, they influenced the Russian society of that time. At the same time, having been forced to raise the cul-tural level of the Russian state by bringing educated Ukrainian personnel to Russia, the Ukrainian bishops inflicted damage by taking part in rendering the Ukrainian in-tellectual potential bloodless.

The Ukrainian bishops' epistolary legacy defined characteristic features of the Ky-iv Academy's intellectual space which was created by generations of the Academy

alumni [1; 9; 10; 12]. Close relations have been established between those of them who belonged to the same or almost the same level of hierarchy, and who were bond-ed together by the Kyiv Academy education, school comradeship, and who eventually obtained high positions in the hierarchy. The prevailing topics encountered in the letters of the Ukrainian bishops were the needs of their Alma mater – Kyiv Academy – and colleges. The correspondence was addressing the issues of their legal status, academic staff, financial support required for academic institutions. Carrying out these undertakings, bishops of the Ukrainian dioceses helped each other and shared their experience. Correspondence between the hierarchs who were the heads of dioceses in Russia and Belarus and their compatriots on the subjects concerning improvement of educational process in schools and seminaries founded or reformed by them, which constituted an intrinsic part of their cultural and evangelical work. Their correspondence also actively addressed the issues connected with literary and publishing activities of the hierarchs; the major part of the correspondence was dedicated to book exchange and book publishing in the Kyiv-Pechersk Lavra which in practice, owing to its publishing house, was the center around which the Ukrainian clerical elite rallied. As witnessed by the epistolary legacy of the Ukrainian church leaders, they never lost their links with the Kyiv Academy and their beloved Ukrainian monasteries where they began their ministry; they protected interests of these institutions, provided them with financial aid, tried their best to return to them at the end of their lives keeping their monastic vows.

Acting sometimes against the will of Russian authorities, the Ukrainian hierarchs tried to teach on the Ukrainian territory. They wanted their last abode to be the monastery where they took monastic vows and which they tried their best to return to, keeping those vows. Unlike secular elite, the church hierarchs of Ukrainian origin did not assimilate into the local nobility: those of them who were not able to return to their native Ukrainian monasteries (53 out of 101) died in Russia where they did not belong. This speaks against the perception that the Ukrainian hierarchs in Russia were lacking all feelings of patriotism and national identification.

The Ukrainian hierarchs have passed on rich heritage which includes works varying in volume, genre and subject matter. They were authors of the main liturgical books which were necessary to consolidate the foundation of Christian Orthodox culture. These books aadressed theological, dogmatic and ritual issues which were raised in the process of interconfessional debates. The bishops created important hagiographic works which augmented prestige of Kyiv shrines and standing of the Ukrainian Opthodox Church as a whole. The characteristic feature of literary activities of early modern time Ukrainian hierarchs was creation of a large number of works which were secular by nature – historical pieces, poetry, drama, autobiographic books, tutorials, works dealing with ecclesiastical and moral issues. This proves that the authors of these works went far beyond their ecclesiastical capacity. Published works of the Ukrainian clerical authors were widely sought after and popular with readers who belonged to different religious confessions (orthodox believers, members of Uniate Church, Old Ritualists); they made an invaluable contribution to the treasury of national and inter-national, in particular

Russian and Byelorussian, culture.

Prominent religious scholars from Petro Mohyla's circle and his followers have developed the concepts of multistage christianization of Russia which were aimed at augmenting the cults of Ukrainian saints, promoting Kyiv as the historical center of Christianity in Rus. Owing to literary activities of Kyiv-based orthodox ideologists Job Boretskyi, Isaia Kopynskyi and Iezekiil Kurtsevych, there appeared the notion of "Russion people", which became a powerful manifestation of ethnic and confessional identification of the Ukrainian clerical elite. At the same time, it should be noted that the statist ideas of the Ukrainian hierarchs promoted in the 1720s, although patriotic by nature, in conditions of the Russian centralized regime have gradually become a monarchist-absolutist theory of enlightened absolutism, as it was seen by its main theoretician Feofan Prokopovych who, unlike the major part of the Ukrainian hier-archs, based his teaching upon supremacy of secular authority over clerical authority.

Creative activity of the Ukrainian hierarchs left an indelible mark in the minds of their contemporaries, including foreign ones. They spoke highly of intellectual poten-tial of Ukrainian religious scholars, in particular Feofan Prokopovych, Stefan Ya-vorskyi, Feofilact Lopatynskyi, Symon Todorskyi, Sylvestr Kuliabka, Samuiil Myslavskyi, and put them in the same line with the European scholars working at the time.

In general, the Ukrainian Orthodox Church hierarchy, which was basically formed by the Kyiv Academy, has become an important phenomenon in the early modern history of Ukraine. It really was spiritual and intellectual elite whose level of education and scholarly status, active ecclesiastical and literary work not only made it in no way inferior to prominent European scholars, but also served as a unique bridge connect-ing Eastern Slavonic countries with Western civilization. The Ukrainian bishops were instrumental in introduction of European values to the Ukrainian society and its eth-nic and cultural consolidation. Missionary, cultural and evangelical activities of the Ukrainian bishops on the territoties of Russia and Byelorussia, augmented by their multifaceted legacy, allowed their works to be of international and global importance.

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PERSONAL AND INDIVIDUAL WORLD OF VIKENTIY SHANDOR

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Annotation. *The personality and individual potential of a talented lawyer, scholar and publicist, a prominent socio-political and socio-cultural figure in Ukraine and the Ukrainian diaspora of the USA, Vikentiy Shandor.*

Key words: *Vikentiy Shandor, scientist, lawyer, public figure, politician, public figure, Ukraine, USA*

Creating social portraits of prominent Ukrainian families is a very important part of the reproduction of the overall process of creating a history and culture of Ukraine, in the «history of which, as in the history of the state, every nation has its own light and shadows, and figures are clear and dark, there knighted and nothingness»[1].

Among the generic Ukrainian elite, the prominent place belongs to the Ukrainian family of Sitsinskii-Chekhov-Sichinsky-Shandor [2], which included many well-known personalities who entered a bright page in the history and culture of Ukraine. Although the recognition of the merits of the majority of members of the glorious family, which, as the famous art historian Demian Gornytkevich wrote, «reaches us already to dynastic dignity, such as the well-deserved families of Chikalens, Drahomanovs-Kosach, Krichevsky» [5, p.46], before the Ukrainian society took place in historiography even during their life, but then a good memory of them was a thorny path of affirmation in the coming generations.

By expanding the personal and individual potential of a talented lawyer, scholar and publicist, a prominent socio-political and socio-cultural figure, a true Ukrainian patriot Vikentiy Shandor (*12.10.1907 - †11.08.2003) [9, p.228; 14], it is worth noting, that he was born in the village of Baranyntsi near Uzhgorod in the family of rural elderly Ivan Shandor and Maria Petrus [11; 13, p. 112; 18].

His «genus always lived in Baranyntsi: all of his grandfather and great-grandfather were Greek Catholics, Rusyns, and no one in the family changed his name» [11].

After the end of the First World War, people began to say that «schools should be Russian, but there were not enough teachers». Therefore, V. Shandor went to Uzhhorod, where he bought «at the printing-house» Unio "bookstore Bukvar about. Voloshin from 1907 and «began to learn Russian from him», along with him studied his school teacher [13, p.2], with whom he had even a conflict because of the attitude towards «dialects between representatives of Ukrainian and Russian orientation» [12].

His father was a delegate to the National Congress of Rusyns (Khust Congress) on January 21, 1919, in Khust, where he voted for the reunification of the region in the commune of Ukraine [11; 13, p.112].

Having graduated from the village school in 1921, Vikentiy entered the Russian civil parish school in Uzhgorod. After her graduation she entered Uzhgorod Teachers' Seminary, but «on the second day of study had a conflict with the teacher-Moskvofil» and therefore left school [13, p.113].

A few days later, with the assistance of a friend from the town peasant, he entered the Uzhgorod Trade Academy (1923-1925), which was subsequently transferred to Mukachevo (1925-1927) [8; 11; 13, p.113; 18]. Training at the academy, which was «the main center of the Ukrainian spirit in the city» [13, p.113], «became a very important stage» in the formation of his national consciousness [16, p.60].

Teacher of the academy, in particular, and Podillya dweller, «a brilliant teacher, a man of exceptional accuracy, businesslikeness, virtue and modesty», «according to the grace of God» [16, p.51], Olexa Prykhodko [11; 13, p.112], «a grain of love for the Ukrainian language and literature, history and culture of the Ukrainian people were buried in his heart» [11]. In 1925-1926, while still studying at a trade academy, he began his cultural work [13, p.113], in particular, organizes youth in his native village [16, p.52], becomes an active member of the local «Prosvita» and co-organizer «Native niva» in Mukachevo [16, p.60].

After graduating from the trade academy, he worked at the Subcarpathian Bank in Uzhgorod (1927-1928) [8; 11; 18], where the specialist Bank of M. Novakivsky made a special impact on him, who taught Vikentiy «political writing, political reason». According to his instructions, V. Shandor in 1929 - in the early 1930's. Every Saturday and every week he traveled «in villages, combining the propaganda of the ideas of Prosvita» Society with campaigning for the Subcarpathian Bank [13, p.113].

Later, his wife Oksana recalled how he was in a time free from his main work with «his comrades-like-minded people traversing the villages of Transcarpathia on the rovers» and «laid the Ukrainian "Prosvita"» [7; 10, p.173; 11].

During 1928-1931, V. Shandor was in military service in the Czech army, first he went to the Kosice Officer School, later he studied in Prague, trained in Uzhgorod, had a number of conflicts on the national soil from which the winner emerged, and eventually becoming an officer, having received the rank of the guarantor [8; 11; 13, p.113; 18].

In 1930 he returned to the Subcarpathian Bank and continued active educational activities, for which he was accused of anti-state activities, but after a long litigation, he was acquitted. The Czech government drew attention to the young politician and invited him to join the ruling Czech Agricultural Party, but V. Shandor did not agree because of its anti-Ukrainian policy [13, p.113].

Having completed his physical examination in a gymnasium, he studied law at Karlovo University in Prague in 1930-1935, but only in 1939 he received the title of Doctor of Law [8; 11; 18], because the authorities failed him on the exam on a higher law diploma education [13, p.113].

In the 30's of the twentieth century. was elected chairman of the Union of Subcarpathian high-school students in Prague, worked at the Zemsky Bank in Bratislava (1935-1945, with a five-month break in 1938-1939). Following the Czechoslovak Republic's adoption on November 22, 1938, of a separate law on Subcarpathian Rus' (Carpatho-Ukraine) as a federal state education, it was an official representative of the Government of the Carpathian Ukraine in the rank of diplomatic representative under the government of Czechoslovakia in Prague (1938-1939) [8; 11; 18] and played a prominent role in the creation of Carpatho-Ukraine as a state [9, p.228].

He was a member of the State Economic Council, established in December 1938 under the Presidium of the Government in Prague as an advisory body to the Government of the Czechoslovak Republic on economic, social and financial problems [11].

A great deal of work was done by the «Czech-Ukrainian Society» and the Czech-language weekly «Karpato-Ukrainian Freedom» [11; 18], organizing radio programs on Carpatho-Ukraine, facilitating the arrival of foreign journalists to Khust [13, p.114], cooperating with the «Ukrainian Society engineers» and the Ukrainian colony society [15, p.26].

On May 4, 1945, V. Shandor, along with his parents' bride Oksana Sichynska, departed from Prague to the refugee camp in Plzen in the American zone [6, ark.2; 13, p.116]. Soon he moved to the camp of displaced persons near Ansbach (Bayern) [6, ark.3], where he married on December 18, 1945. In January 1946 he moved with his wife to Frankfurt [6, ark.3, 15, p.205], where was born son Ivan (*26.09.1946) [15, p.220].

In 1945-1947 he studied economic sciences at the university. Johann Wolfgang Goethe in Frankfurt (Germany) [8; 11; 15, p.208] and studied English in a private way [15, p. 214].

In August 1947, he and his family emigrated to the United States [15, p.210], where he settled in Elizabeth. At the end of 1949 he moved with his family in Paterson city [6, ark.4], where Bohdan's son was born (*May 21, 1952) [6, ark.5].

In 1953-1954 he studied political science at Columbia University (New York) [8; 11]. In 1980, Shandori bought a small hut in Edison, «in the area where Bohdan's son and his family still lives» [6, ark.5].

In the United States, he carried out extremely fruitful socio-political and public work in the Ukrainian community, in particular, from 1948 to 1961 he was the Administrative Director of the Secretariat of the Pan-American Ukrainian Conference, in 1948-1960, a member of the publication and information commission of the Ukrainian Congress Committee of America, in In 1949, he became the initiator, co-founder and long-time chairman of the All-American Society of the Carpathian Union of America, from the 1950s, a member of the Society of Ukrainian Lawyers in New York and editing the «Legal Bulletin»; in 1959-1972 he worked in the Department of the Fin Nsv, since 1989, is headed by the Assistance Committee of the Carpathian Union to them. Major of UPA Ivan Shpontak. As a qualified economist, lawyer and political scientist and expert in a number of European languages, he was a member of the United Nations Secretariat in New York for Slavic countries, including the USSR, for several years, from 1985 to

1989. - Deputy Chairman The law enforcement body (the government - A. T.) of the UNRad of the State Center of the Ukrainian People's Republic in the exile [8; 9, p.228; 11; 14; 18]. In 1953 he received US citizenship.

Having three professional education (jurisprudence, economics, political science), a considerable part devoted to scientific work. In 1953-1957 he taught international law and political science at the Ukrainian Technical Institute (New York), from the 1970's on the basis of numerous reports, over hundreds of scientific and journalistic articles and intelligence in many languages on the legal-political themes, individual works and monographs on the history of Transcarpathia, became a correspondent member of the NTSh, for some time was the deputy chairman of the NTSh. His knowledge of nine languages (English, Bulgarian, German, Russian, Serbian, Slovak, Hungarian, Ukrainian, Czech) contributed to the active research work, which gave him the opportunity to use in his works a fairly «broad literature accessible to a few scholars» [8; 9, p.228; 11].

For a significant contribution to the study of the history of Transcarpathia, a fruitful socio-political activity during the 30's and 90's of the XX century. Viktoria Sandor was elected an honorary member of the Transcarpathian Regional Educational Society «Prosvita», an honorary doctor of law and political science of the Uzhgorod National University, and in 2000 he was awarded the Regional Prosvita Prize. Augustine Voloshina [9, p.228; 11; 17; 18].

The wife of Oksana, the daughter of a famous Ukrainian art historian Volodymyr Sichynsky, «helped a man in his scientific and social work» [11]. He met with his future wife on June 21, 1939, during the defense of a lawyer's diploma [15, p.74]. Their meeting has become an impetus for almost 60-year-old married life [8].

«The last of the Mohicans, among the great figures of the history of Transcarpathia of the twentieth century», the last member of the Carpathian Ukraine Viktorenty Shandor, who, with his «ascetic labor, glorified his native Transcarpathia and the whole of Ukraine», died at 96 years of life on August 11, 2003 [4; 9, p.228; 11; 18] in the American city of Somerset (state of New Jersey) [3]. He was buried in the cemetery at the Church of St-Monument. Andrew in the town of South Bounty Brook [4].

The scientific novelty of the results obtained is that for the first time, the personality and individual potential of a member of the famous Ukrainian family of Sitsinsky-Chekhov-Sichinsky-Shandorov, a well-known lawyer and cultural and public figure of the Ukrainian Diaspora, Vikentiy Shandora who lived in Ukraine and believed in her better future.

The concrete theoretical and practical significance of the results obtained is that they are part of the dissertation research and enable the creation of a holistic social portrait of the glorious Ukrainian dynasty of the Sitsinsky-Chekhov-Sichinsky-Shandor dynasty, whose members, with their daily work, took care that Ukraine became a free and powerful state, devoting itself entirely to serving Ukraine and its people. Returning to Ukraine the names of members of this famous dynasty family is impossible without studying and analyzing the entire multi-faceted heritage of each individual member of the family, understanding his multidimensional activity and creative heritage.

Approbation. The article is submitted for the first time and has never been published anywhere.

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CULTUROLOGY

MANAGEMENT OF CLUB ORGANIZATIONS IN THE HIGHER EDUCATIONAL INSTITUTIONS: INNOVATIVE APPROACH AND CREATIVE TECHNOLOGIES

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Annotation. *The article substantiates the quality of the creative education,which is necessary for the organization of the educational programme, including the preparation of the managers of club organizations. The author considers methodological approaches to the definition of the essence of the concept of "creativity". The views on the role of the innovative approach in the educational process of the higher education institution are analyzed. The emphasis is on the certain key factors in implementing a competent approach and the main features of a creative manager of the club organizations.*

Key words: *innovative approach, creativity, creative education, innovative teaching, competent approach, management of the club organizations.*

In the modern socio-cultural situation in the institutions of the higher education, a concept that implements an innovative approach based on the student's personality, respect for the uniqueness and dignity of the individual, the development and self-development of his natural instincts and abilities, the establishment of a harmonious situation and the creative community of clubs can be productive unions. Today, we are increasingly seeing that the harmonious socio-cultural space should be the main priority, and the institution of the higher education is an educational system. The higher education institutions are fundamental to the development of society, they create a model of the future human relations. However, the state of the modern societies, the economic crisis, conflicts, spiritual degradation complicate its livelihoods in this regard. Therefore, it is extremely important today to productively manage the process of formation of the moral and value relationships of the individual, to find ways to overcome the difficulties of the subjective and objective order, which hinder the development of these relations. In these conditions, the problem of institutions of the higher education in general and the organization of the cultural-leisure activities of students clubs in particular, becomes extremely relevant.

Innovative approach to the educational process of a higher education establishment is not only the preparation of students for a particular type of the economic activity, but also the formation of the necessary thinking of the individual for the analysis, vision and solution of the coordinate system, the roadmap, a certain range of topical issues facing the organization, which will be to carry out the activity of the future specialist of socio-cultural sphere. This is not so much the accumulation of a certain amount of

knowledge from a variety of the academic disciplines for four or five years of study, but the development of skills and abilities that can stimulate creative activity, which in turn forms the innovative potential of an individual in mastering the necessary knowledge.

Exploring the foundations of an innovative approach, first of all, it is necessary to pay attention to the term "innovation", which means "the implementation of new ideas and innovation." The term "innovation" was first explored and substantiated by the Austrian (later American economist) Joseph Schumpeter (1883-1950), in his work “The Theory of Economic Development” (1911), by the way, in 1909-1911, he was a professor at Chernivtsi University (Ukraine). According to J. Schumpeter, there are five types of new combinations of change or innovation:

1) the production of a new product or a known product in a new quality;
2) the introduction of a new production method;
3) the involvement of new sources of raw materials for the production process;
4) development of a new market;
5) the introduction of new organizational forms [6, p. 159].

In our understanding, the concept of "innovation" is the final climax of the organization or personality that creates and presents a new product in the market of goods or services considering it, both in the technological process of creation and in the system (statics - actions), or makes changes and improves an existing product that has already been introduced to the market.

In the practice of the higher education, the innovative approach is embodied in the so-called creative education. The term "creativity" became widespread in the 1960's, after the publication of J. Guilford's work (1967) [7], through which the present-day psychology of creativity is actually born. J. Guilford and his team have identified 16 hypothetical intellectual abilities that characterize creativity. Among them: the speed (the number of ideas that arise for some time unit); flexibility (the ability to quickly switch from one idea to another); originality of thinking (the ability to produce ideas that are different from common ones); curiosity (increased sensitivity to problems that do not cause interest in others); irrelevance (logical independence of reactions from stimuli) [4, p. 328-331].

For E. Torrance (1979) [8], creativity is the ability to sharpen the perception of the shortcomings in knowledge and elements that are lacking. He proposed a model of creativity, which includes three factors: speed (productivity), flexibility, originality. The criterion of the creativity, in his opinion, is not the quality of the result, but the characteristics and processes that activate creative productivity [2, p. 25]. In the modern period, the term "creativity" refers to the process and the product of the creation of something new; his subject and the circumstances in which the creative process takes place; factors that determine it. Under the term "creative" is meant a creative person, inclined to non-standard methods of solving problems, capable of original and non-stereotyped actions, the discovery of a new, the creation of unique products [3, p. 266]. Creativity (from the Latin creature - creation) - is the ability to generate extravagant ideas, deviate from the usual patterns of thinking, quickly solve problem situations [5,

p. 225], whereas creativity is a process, an activity whose result is the creation of new material and spiritual values.

Thus, from the introduction we can conclude that creative education is focused on the development of creative abilities of the future specialist, a real understanding of their own personality, self-development and consolidation in the professional consciousness of installations in search of innovations, analysis of problems and varieties of activity.

The purpose of our research is to highlight the innovative approach and identify the main areas of creative education necessary for its implementation in the educational space of higher education institutions through the management of club organizations

Creative education in the institution of higher education has a number of distinctive qualities:

1) the educational process is constructed on a systemic basis, manifested in a unified integrity and mutual complementation of the received knowledge, when the harmonious structure of student's personality knowledge generates and encourages creativity and is the basis for efficiently increasing professional knowledge;

2) technology of the educational process, forming in the consciousness of student youth certain professional relationships, and their practical significance in real situations;

3) methods of transfer and acquisition of knowledge, the purpose of which is to apply not only training in managerial operations of professional activities, but more exploration of the personal factor in the ratio of the totality of these operations;

4) the methods of interactive learning have become widespread in educational activities: business games, disputes, round table, press conference, "brain attack", case studies, game design, work in small groups, presentations that form and implement rational grain technology education and do not focus only on the mastering of the disciplines of the fundamental cycle;

5) the main factor in its construction and methodological support is a problem that needs to be solved by the manager of the organization. [1, p. 187].

Thus, the activities of the manager including the manager of socio-cultural activities, manager of club organizations - this is the solution to actual problems, and only in their decision, he uses knowledge and sees their regularity and significance. The principle of problem learning is realized in the method of presentation of knowledge, which is provided, mainly not in the form of consistent general provisions, stencils, templates, proven recommendations, indisputable interpretations, etc., but in the form of a permanent cyclic operating process, in which the main role plays an urgent problem and various ways of its solution.

An important feature of the creative education is its motivation (from the Latin movere) - an inducement to action. Motivational factors can be: realization of personal abilities, using imagination, fantasy and intuition; apply for professional purposes erudition, life experience, professional ambitions, or the need for relevant knowledge and skills in accordance with the requirements of modern professional activities. When organizing the training of managers it is necessary to take into account that in the course of their professional activities, they act in one way or another role. In practice, all these

roles are implemented in certain combinations. Therefore, education should be oriented not only on the functions of the activity but on the role of the modern manager. Here and there is a need and the need for creative education, because only it can orientate on the role of the generator of ideas [1, p. 188].

Thus, creative education is the most important condition and criterion for the qualitative preparation of modern managers of the socio-cultural sphere, managers of club organizations - is the education of the future, which is born today.

Principles and characteristics of the innovative training of managers of club organizations in recent times find their implementation in a competent approach to the organization of educational activities, in which the main goal is the formation, based on the abilities and motives of each student of their range and depth of personal and professional qualities - competencies. Competence is now the starting point for creating a curriculum and curriculum, the choice of teaching methods and methods for diagnosing the quality of education.

The program of the training course "Management of club organizations" is designed to promote the formation of a holistic and systematic managerial outlook of the student, to stimulate the development of leadership, entrepreneurial and civic attitudes of a future specialist capable of protecting cultural values and promoting the economic interests of Ukraine in a competitive national and international environment. In the system of competence of the manager in accordance with the main spheres and features of his professional methods of activity, the following groups are allocated: functional competences, social competences, intellectual competencies, situational competencies.

The implementation of a competent approach to the organization of educational activities, including the preparation of managers of socio-cultural activities, managers of club organizations, requires the creation of new forms of support educational process.

As a result of studying the discipline "management of club organizations" the student must know and understand:

1) the essence and limits of the identity of the subject;

2) the positioning of club organizations in the socio-cultural space;

3) sources of origin and stages of development of club organizations as a certain type of socio-cultural activity;

4) the internal structure of the socio-cultural sphere - its directions, types of organizations, main types of subjects and typical professions, key mechanisms of management activity;

5) features of the market, the main types of its goods and services;

6) principles of branding;

7) the structure and functioning of the club infrastructure;

8) the most important historical events, facts and logic of processes of development of world and national management of socio-cultural activities.

In the activity of the manager of the socio-cultural sphere in the formation of the concepts of student club organizations, it is necessary to consider the following criteria:

• Student club should be open system of artistic and creative development of

personality in interaction with socio-cultural environment of its life.

• Participants in student club organizations must quickly adapt to new approaches in the innovative artistic and creative development of the team, to a new strategy of interaction between the participants of this process, to modern new requirements of socio-cultural practice.

• artistic and creative activity of student club organizations should be revealed and deepened at the level of practice with an orientation towards humanistic, national and cultural values.

• managing the process of artistic creativity of students, united in the club team, carried out by its leader - mentor - manager.

Thus, the purpose of the activity of student club organizations is to provide the aesthetic and educational influence of club events on the formation of the inner world of its participants, the awareness of their spiritual values, the development of their ideological positions of life creativity, as well as the content content of youth leisure by various forms and forms of artistic creativity.

First of all, offering a concept that involves the formulation of the various aspects of student youth participation in productively ordered activities, one needs to distinguish:

1) application of the principles aimed at forming interests, needs, values orientations of students;

2) promotion of self-determination, self-improvement, self-realization of each participant;

3) formation of world perception and value attitude to national culture;

4) the use of techniques, methods and forms of work to create an atmosphere of co-creation between subjects and objects of club activity;

5) ensuring a positive psychological climate in the activities of the student club;

6) the idea, creation and implementation of events, cultural and artistic projects that meet the current requirements of socio-cultural practices;

7) application of an integrated approach to the organization of student club activities.

Thus, the main purpose of the introduction of the socio-cultural concept in the activities of student club organizations of the institution of higher education is to create conditions that help in the first place in the socialization of the student's personality, the identification of his individual qualities, the acquisition of knowledge, skills, skills, stimulation of activity in various areas of specially organized artistic and creative work.

According to the goal, principles, approaches and principles, we determine the main functions of the socio-cultural sphere in the activities of student club organizations. The integration of educational, developmental and recreational functions defines the content of the concept and is directed at the knowledge, assimilation and translation of spiritual values, as well as the identification of the personal qualities of the club members in the cultural-leisure sphere. The Student Club covers a variety of activities, which allows you to project the dynamics of performance in achieving the goals and development of the creative personality of the participants in the organization. In accordance with the functions embedded in the concept, a composition of specialists capable of effectively

implementing the artistic and creative process in a higher education institution will be formed.

Thus, taking into account certain functions and factors, we will ensure the variability of the content and forms of training in the integral context of the organization of the activities of the multi-lingual student club.

The concept of the organization of the student clubs will be tested in four stages: 1) ideologically ascending; 2) structural-indicative; 3) strategic and technological; 4) festival-realization.

Within the ideological and upstream stage, the organization of a student club in an institution of higher education as an idea will be formed in accordance with the official decision of the leadership or organization of student self-government [2, p. 190-193].

Strategy formulation: the mission of appointment, based on the existence of the organization reflected in the planning of the student club.

Characteristic features: organizational instability; short-term ideas about internal and external processes.

We define the following tasks: implementation of the ideological, psychological and pedagogical diagnosis of the organization and the members of the team: what is the organization created for; what values the organization promotes; understanding of the members of the organization of corporate standards, creation and planning of the work of the artistic and creative council. For this purpose, forms and methods of work will be applied: the collective form of the activity of a student club requires methods of free conversation, explanation, illustration, etc .; individual form of work - encouragement, poll of participants, listening, observation, evaluation of individual properties and qualities; cooperation between the leadership of the educational institution, the art council, the public in defining the mission, goals, objectives, work of the club staff.

The purpose of the structural-orientation stage will be a natural need for further activities through the expansion, structuring of the organization and planning of activities.

Strategy formulation: the planning and drawing up of activity plans for the year, the mission and tasks are formulated and based on those ideas that laid the foundation for the organization in the first stage.

Characteristic features: division of responsibilities; teamwork and formed hierarchy; own standards and methodology; financing combined with long-term planning.

At this stage, the tasks are: to familiarize participants with the structure and diversity of the student club; formation of interests in culture and art, artistic tastes, development of empathy, creative qualities and properties. The tasks of this stage were: to apply various forms (lectures, interviews, collective visits to concerts and historical and cultural monuments, workshops, meetings with prominent figures of culture and art, planning and implementation of events, rehearsals, follow-up projects) and methods of work : (communication, persuasion, suggestion, upbringing on a positive example, self-knowledge, stimulation, illustration of artistic values and cultural achievements) for the productive organization of the student club.

Thus, the methods and forms of work used at this stage contribute to the active

enrichment by students of new knowledge, the formation of value orientations, moral imperatives, artistic tastes, preferences, development of needs and interests by means of cultural and artistic practices, allow to realize the mission, purpose, structure and the direction of activity of the student club.

At the strategic-technological stage, conditions will be created for "immersion" in the content of the practical activities of the student club members.

Strategy Formulation: Development of Strategic Club Management.

Characteristic features: constant exchange between linear and functional management structures; long-term plans; increase in quality and focus on results; A clear focus on the target audience.

The main tasks of this stage: the formation of the practical skills and skills necessary for the activities of the student club; actualization of theoretical knowledge on culture and art. At this stage, the following forms of work are used: rehearsals, lessons, practical work, analysis of events. Among the main methods - explanation, illustration, reproduction, exercises, search methods, situational creative tasks.

Thus, the work carried out at the strategic and technological stage will prove its effectiveness. This will be reflected in the students' creative attitude towards various activities of the student club, in shaping the creative abilities of rethinking new knowledge from one branch to another, obtaining new information, actively interacting with the execution of specified tasks.

The next festival-realization stage will be aimed at realizing the acquired knowledge, skills and skills of the participants in the activities of the student club.

Strategy Formulation: New Management Methods, Interactive Strategic Management. Characteristic features: the lack of a clear demarcation of the functions of employees, flexible relationships in the student collective; ingenuity, creativity, innovation.

At this stage, the following tasks were put forward: analysis, design and implementation of projects; participation in various cultural, artistic and leisure activities; demonstration of the practical level of the student club. Forms of work: preparation and organization of collective performances; participation in concerts, festivals and contests; analysis and discussion by participants of the student club of artistic events, works, impressions from their own projects. The methods of dialogue, mutual influence, empathy, comparison, psychological influence, subordination, discussion, round tables, taking into account thoughts, strategies of own behavior, etc. were used.

Conclusions. Thus, theoretically developed content characteristic of the concept of the organization of the student club will be practically implemented as an integrative approach at all stages of implementation. Thanks to it, students will intensively develop knowledge, practical skills and skills in the socio-cultural sphere.

To summarize, the main features of the future creative manager of club organizations should be emphasized, which defines: a problem vision of the world, working with facts and objects in the socio-cultural sphere; carries out modeling of situations; conducts productive cognitive, communication and presentation activity during practical, training

sessions; demonstrates creative approaches using imagination, fantasy and intuition; puts and formulates management goals and objectives; carries out a systemic and panoramic perception of reality, psychological self-regulation, insight, inertia of thinking, the ability to attract people to joint activities, the ability to quickly rebuild.

New research into this problem should be aimed at clarifying the composition of the elements of the creative manager system and developing new innovative methods.

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ARCHITECTURE

THE EFFECT OF ENERGY SAVING TECHNOLOGIES IN SPATIAL DECISION MEDIUM STOREY HOUSING IN THE FUTURE

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Annotation. *The article considers the issues of interior design of residential premises with energy-saving technologies. A perspective model of the organization of interior design of housing equipped with specialized technological equipment has been formed. In the paper, possible prospective ways of developing a housing architecture with energy-saving technologies are analyzed in detail. As a result of the study, a direct dependence between energy-saving technologies (their types) and the features of the volume-spatial solution of the average surface housing with ap-propriate equipment was revealed. Thus, in the world practice, wind turbines are located far from people's places of residence (on remote islands, fjords in Norway and the like), since the noise level from their work affects all living organisms (in-cluding humans). The specifics of hydroelectric power station location is to take in-to account the power of water flow and the possibility of using its energy in these specific natural and climatic conditions.*

Key words: *energy-saving technologies, technological equipment, national tra-ditions, synthesis of arts.*

Introduction. The dynamic development of modern technologies has al-lowed humanity at the turn of the millennium to make a breakthrough in various sectors of the economy. One of these industries was the construction. Building technologies, pushed from outside by discoveries in science and technology, re-ceived a significant push and influenced the formation of the architecture of the future. In particular, streamlined, bionic, organic forms were the most expressive in identifying the features of the spatial solution of different types of buildings depending on their purpose, size, typology and local conditions of design and construction.

The issue of solving the problem of energy saving (in particular energy sav-ing in residential buildings) is extremely relevant today. This is due to many dif-ferent aspects: the dynamic development of the demographic situation in the world's poorest countries; the need to find effective ways to replace the mass use of non-renewable energy sources; finding ways to solve the problems of energy supply of various types of housing and non-residential premises; identification of scientifically based methods and techniques to increase the energy efficiency of housing and identify the impact of energy saving problems on the formation of architecture (functional planning and spatial solution of buildings).

The Research Objective and Results. Such a wide range of objective prob-lems

has led to a significant increase in the share of scientific works that justify various ways of energy saving and energy efficiency of housing. In addition, there is an acute problem of compliance of the designed housing with the new require-ments of energy efficiency. Indeed, quite interesting is the question – how will the requirements for energy-efficient housing affect its functional and planning struc-ture and spatial solution, orientation in space and placement on the site? So, there are a number of factors that affect the formation of housing with energy-efficient technologies. a detailed analysis of scientific sources and examples of practical application of energy-efficient technologies in the living space in the world allow to identify a number of significant factors that affect the formation of the architecture of medium-rise residential buildings, namely: demographic, ergo-nomic, typological, socio-economic, natural-climatic, urban planning; functional planning; technological (associated with the features of energy-efficient equip-ment in relation to housing); constructive and technical; environmental, artistic and aesthetic (composition), and the like. All of these factors must be considered in a comprehensive and immediate context, taking into account the availability of local design and construction materials.

At this historical stage in the design of energy-efficient housing there are the following three questions that stand before modern architects: what are the modern energy-efficient technologies and how can they affect the architecture; how to form a function of the internal housing and its functional and planning structure under the influence of features of advanced energy-efficient technolo-gies; new energy-saving technologies will affect the formation of volume-spatial decision of housing medium-rise buildings (individual houses and design of entire residential neighborhoods)? Unfortunately, Iran and Ukraine are far behind the leading countries in the mass production and design of energy-efficient equip-ment, but the domestic markets of these countries are increasingly getting sam-ples of advanced technologies, which can possibly determine the main trends in this industry in the near future. It turns out that the modern stage of development of energy – efficient equipment is one of the stages of its progressive develop-ment. That is why architects all over the world expect clearly defined tasks on the formation of future housing with energy-efficient technologies. For example, al-ready today there are steady trends towards reducing the physical size of solar cells and increasing their energy efficiency regarding the collection, storage and transmission of energy over long distances.

Thus, briefly describe the process of interconnection of process equipment with the premises in which it is located, as follows: technology – function – ar-chitecture. This triple formula will allow the architect in the near future to go to the complex of requirements that will be put forward before the architectural shaping. The only thing that makes quite significant adjustments to this form – making process is that scientists, physicists-electrical engineering, energy, econ-omists have not yet decided on a set of requirements for energy-efficient equip-ment and features of its placement in housing in the near future. This is due to the fact that we all historically live in the period of formation of energy-efficient equipment, which can make significant adjustments to its shape, structure, size, placement features, typological features, the system of interaction with the archi-tectural environment and the like.

A systematic approach to architectural form will take into account all pos-sible impacts and modifications that will contribute to the effective implementa-tion of energy-efficient equipment in the architecture of modern housing. To do this, it is necessary to create a block diagram of the algorithm of actions in the design of housing, which would provide not only for its progressive develop-ment, but also the progressive development of technologies that have changed depending on trends in energy supply. According to many international experts, Ukraine and Iran are at a low level with respect to the development of energy-efficient technologies, but at the same time it gives these countries the opportuni-ty to respond quickly to the main trends and changes in the field of energy sav-ing. That is, they have a unique opportunity "from scratch" to form an algorithm of actions in the field of energy supply of different types of housing and non-residential premises, depending on the modifications in scientific developments and approaches to the formation of the energy concept of an individual state or a whole region.

The proposals developed by the author concern a systematic approach to the implementation of scientific activities in the architectural form of medium-rise housing with energy-efficient technologies. That is, an algorithm of actions in the complex design of housing with energy-saving technologies of ETA (Fig. 1). What can be decisive in the creation of such an algorithm?

The system of any formation should provide for the possibility of adjusting the final idea, depending on the new identified conditions and factors of influence on the process of this formation.

From the very beginning, the researcher of this sphere should understand that the problem of energy saving in the whole world is under development, in the process of formation of technologies and appropriate equipment for different sources of renewable energy (solar, wind, water and earth energy).

It is quite difficult for architects to develop design documentation and to predict complex recommendations on design of energy-efficient housing when ac-tually unclear specification is put, there are no accurate requirements from scien-tists-power engineers, physicists, technologists and so on.

That is, there is a unique phenomenon of forming the architectural envi-ronment of housing, when the technology of its energy supply is in the process of refinement and permanent formation.

That is why let's try to describe the author's proposed algorithm of shap-ing, as it can be the basis for all further actions in the design of various types of buildings with energy-saving technologies. First, the design process itself as a process of any scientific research is justifiably divided into three main stages: analysis, synthesis, implementation. Analysis stage (Fig. 1) provides for familiar-ization with the object of design and study of domestic and foreign experience: analysis of initial data (study of the site, insolation conditions, terrain, natural and climatic conditions, design tasks, etc.); analysis of literature (research papers, identification of the relationship between theoretical and practical developments in the field of energy saving architecture); study of existing analogues (analysis of domestic and foreign experience in the design of the

architectural environment with the ETA. This is the first stage of the study. The second stage involves a complex processing of information obtained in the first stage of the study. If the first stage concerned the general provisions of the formation of housing architec-ture on a particular land plot, the second stage allows to specify the project task taking into account the features of energy-efficient technologies.

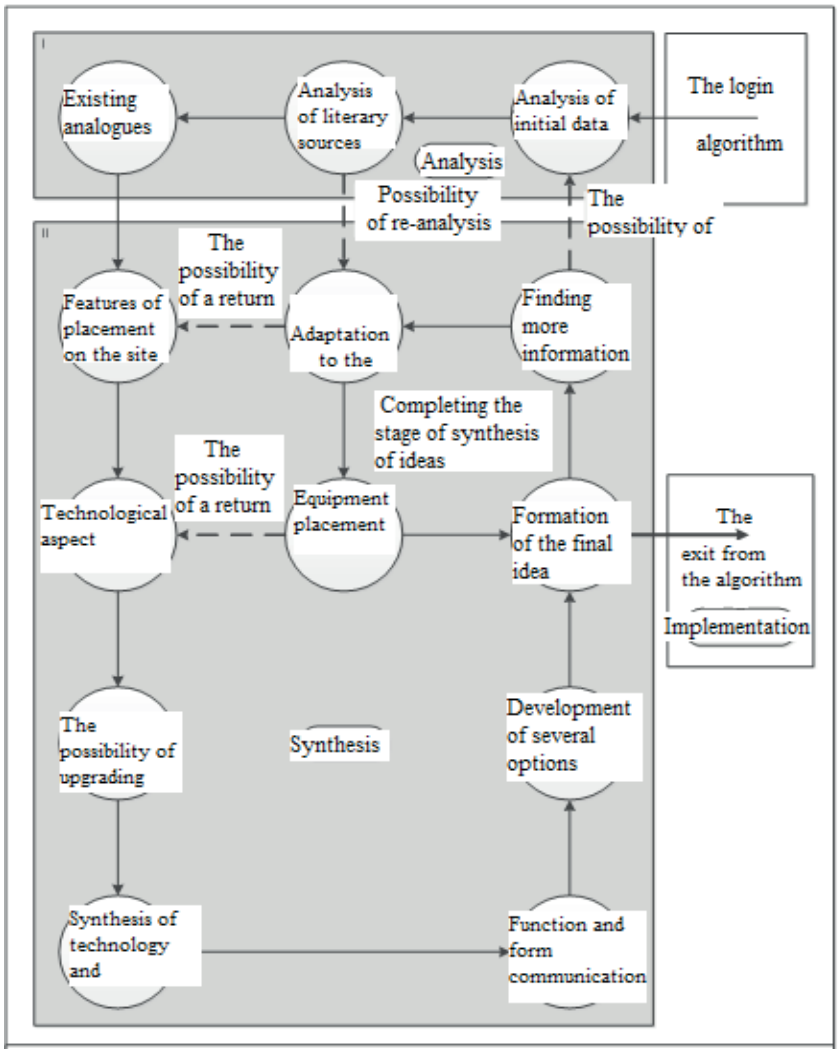

Fig.1 sequence of actions in the design of housing with energy-saving technologies

This stage involves taking into account: the features of placement on the construction site; technological aspects of energy saving; the possibility of mod-ernization of energy-efficient facilities in the reconstruction of housing (recon-struction with modernization); features of the synthesis of new technologies with architecture; connection of functions

and forms embodied in the functional plan-ning and space-volume solution; the development of several design options, from which it will be possible to choose the final best (Fig. 1).

This block of issues of housing design with energy-efficient technologies can be combined under the name "synthesis". It will organically combine several consecutive steps of system design: features of placement of the energy efficient equipment in the building; adaptation of technologies to the existing environ-ment; search of additional information concerning a possible variety of options of the decision; formation of the final idea on the basis of variable selection from several possible decisions (Fig. 1). As shown in the figure, logout provides the ability to return to the previous stages for the purpose of system adjustment and finalization of the final idea. So the stage of analysis involves the consideration of individual elements of the system apart, highlighting the most important aspects of the formation.

The next stage of synthesis involves a systematic combination and selection of the main aspects of the formation of architecture, allow you to select only those factors that are important in the design process. The synthesis involves combining the results of the analysis and systematization of the forming factors in order to obtain the best result: the search for additional information; adapta-tion to the environment; taking into account the features of equipment placement in the structure of the building; formation of the final design idea through clau-sura and sketch (forproject) with the output of the proposed algorithm of action (Fig. 1).

Conclusions. As a result of the study, a direct dependence between energy-saving technologies (their types) and the features of the volume-spatial solution of the average surface housing with appropriate equipment was revealed. Thus, in the world practice, wind turbines are located far from people's places of resi-dence (on remote islands, fjords in Norway and the like), since the noise level from their work affects all living organisms (including humans). The specifics of hydroelectric power station location is to take into account the power of water flow and the possibility of using its energy in these specific natural and climatic conditions. The leader in the process of providing housing with heat and energy is renewable solar energy. Effective placement of solar collectors involves, firstly, the correct placement of the house in relation to the surrounding area; secondly, the southern orientation of the collectors themselves; latitudinal or regional placement of the buildings themselves in space, as well as the regulated equip-ment of the batteries themselves, which, with the help of sensor systems and ap-propriate computer programs, can return towards the most effective sunlight de-pending on the time of year and time of day. This approach will allow to effec-tively use all the form factors in the process of designing housing with ETA.

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