 # 3 (21) September, 2023

ISSN 2641-9823

GLOBAL ACADEMICS

International Journal of Advance Researches

Quarterly Issue # 3 (21):

The Role of Intellectualism in the Formation of a New Trend in Social Development

www.i-journal.org

GLOBAL ACADEMICS

International Journal of Advance Researches

The Journal has been added to the Library of Congress electronic resource database. Control No.: 2019201864.

Intellectualism emphasizes intelligence and innovation as a source of social development. This is the most appropriate approach to optimize social development. This is a topic of high significance, and the current Issue highlights this fact.

Contents

INTELLECTUALISM – THE CONCEPT OF NATIONAL ECONOMIC DEVELOPMENT

Ievgen Bazhenkov

Doctor of Economic Sciences, Associate Professor,

Director,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Yuriy Safonov

Doctor of Economic Sciences, Professor,

Deputy Director,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Abstract

Globalization transformations especially focus on innovative processes, which are the driving force for ensuring the development of the national economy and its segments. Innovation and investment processes form intellectual capital, which is the basis for the socio-economic development of the country as a whole, as well as for the successful operation of individual economic entities.

Keywords: intellectual capital, intellectualism, innovations, human intelligence.

Intellectual capital is a structurally complex phenomenon, which, along with the elements of humanitarian and consumer capital, includes the so-called structural capital, respectively, includes innovative capital, and the latter - a complex of objects that constitute intellectual property [3].

A significant contribution to the research of the fundamental factors of intellectual capital was made by: E. Brooking, V. Geitz, J. Galbraith, L. Edvinson, S. Ilyashenko, R. Kaplan, K. Kovtunenko, M. Malone, D. Norton, T. Stewart and others Research on human capital of tourism infrastructure enterprises, management and protection of intellectual capital of service-oriented companies by N. Bontis, T. Engstrom, H. Rudezh, T. Myhalich, A. Kianto, S. Yanosevych and others become valuable. Approaches to the formation of theoretical provisions for the management of intellectual capital of domestic enterprises were reflected in the scientific works of N. Gavkalova, O. Garafonova, V. Heits, O. Grishnova, S. Ilyashenko, O. Kendyukhov, A. Kolot, O. Litvinov, V. Margasova , O. Sobko, A. Cherep, V. Shcherbachenko and others.

The term "intellectual capital" was first used in 1969 by the famous economist J. Galbraith to study intellectual activity in the relevant environment.

Intellectual capital is a type of capital that has the corresponding features of capital and reproduces, at the same time, the specifics and features characteristic only of it (intellectual capital) [2].

Intellectual capital is knowledge that can be converted into value, or it is the sum of everything that employees know and possess and that forms the competitiveness of a business entity; this concept is difficult to accurately identify and even more difficult to use effectively [7].

Intellectual capital is knowledge expressed in the form of assets, which to the greatest extent strengthen the competitiveness of the business entity, generating added value for its shareholders [6].

E. Brooking identifies intellectual capital and intangible assets of the enterprise, which are the basis of its existence and competitive advantages. The main components are: human assets (knowledge, experience, creative abilities, etc.), intellectual property, infrastructure and market assets [1].

Thus, intellectual capital is an integral interaction and interdependence of human, organizational and consumer capital, which, due to knowledge, skills, experience, know-how, intellectual property and socio-economic ties, ensure the creation of added value and influence the innovative development of the corresponding socio-economic system.

In the structure of intellectual capital, it is necessary to distinguish two components: resource

and potential, that is, the opportunity and ability to effectively realize intellectual capital. The division of intellectual capital into resource and potential parts allows for a more accurate analysis and assessment of its level, to find "bottlenecks", to reasonably develop measures aimed at development and implementation in relation to specific market conditions. Human, organizational and consumer capital must be considered as subsystems of intellectual capital, which is itself a complex system. They constantly interact with each other. At the same time, a synergistic effect, both strengthening and weakening, is possible [1].

Intellectual capital is the result of the process of transforming knowledge and intangible assets into useful resources capable of providing competitive advantages of the relevant socio-economic system.

Intellectual capital is one of the main elements of an effective strategy for the development of the national economy and an important tool for acquiring and maintaining competitive advantages of any economic entity. Qualitative changes in the national macroeconomic environment create the need for continuous and fundamental innovations in economic activity, supported by appropriate management tools, including forecasting, planning, accounting, control, analysis and evaluation. Innovations for economic entities are additional profits, improve competitiveness indicators and ensure strategic development.

The study of factors affecting the development of the national economy allows us to conclude that its structural restructuring is taking place, which changes the structure and necessary competencies of management personnel. The intensification of eliminations is obvious - from the technical and technological structure of the development of the national economy to the intellectual one. The share of services prevails in socio-economic activity, the role of intellectual labor is growing sharply, transaction costs for digitization of business processes, promotion of products (services), consulting services for business entities, etc. are increasing.

Increasing instability in the national macroeconomic environment, reducing the predictability of crises while simultaneously increasing their depth require a significant expansion of the horizon of macroeconomic forecasting.

The complexity and inconsistency of the process of intellectualization of the results of economic activity, as well as the peculiarities of solving the tasks of intellectual, intra-corporate reproduction, which make it necessary to specify and detail the subject-object integrity of the

strategic management of intellectual capital in the relevant socio-economic system.

The defined integrity is objectively determined by the essential unity of intellectual capital, which visualizes the system of actualized innovative knowledge used in the relevant economic system to reproduce vital values and ensure strategic development.

Continuous formation and development of intellectual capital is a necessary process of conscious influence on the dynamics of the creation and use of relevant intra-industry competences, starting from the stage of their emergence or actualization and ending with the stages of their capitalization and further commercialization, requiring management personnel to develop modern tools for strategic management of intellectual capital and innovations in the field of education.

The main goal of strategic management of intellectual capital and innovations in the educational sector is to ensure the highest possible high efficiency of intra-industry intellectual capital, as well as to preserve its quality, relevance, efficiency and renewability.

The effective effectiveness of transformations in the educational sector is determined by the influence of intellectual capital on labor productivity, which significantly affects intra-branch strategic development.

The key factor affecting the strategic development of any segment of the national economy is human intelligence, the social and economic efficiency of creating intellectual capital, and the factors influencing Ukrainian society.

Intellectual capital is a competence resource of socio-economic development of the educational sector, and social-labor relations reflect the main parameters of intra-industry intellectual capital development.

Intellectual capital is capital embodied in knowledge, skills, experience, personnel qualifications, intangible resources and communications. The return of such capital is carried out in the form of the quality and productivity of labor resources.

The problems of intellectual capital are systematically studied all over the world, it is generally accepted that it is intellectual capital that is the driving force behind the development of individual international companies and national economies.

Intellectual capital is focused on the following elements:

- Aggregate competencies of labor resources and accumulated experience.
- Intangible assets or intellectual property.
- Information and communication networks.

Among the essential features of intellectual capital as a philosophical socio-economic category, defining ones include that:

- Primarily based on the intellectual properties of individuals.
- Possess the property of accumulation.
- Ensure future socio-economic benefits: through satisfying the needs of society, income from intellectual capital as an economic resource, and increasing revenue from other resources as a result of the functioning of intellectual capital.
- Formulate capital, long-term, and sustainable competitive advantages for economic entities.

The study confirms that the effectiveness of the implementation of intellectual capital in the relevant socio-economic system is largely determined by the state of the organizational component. The existing realities of the formation and development of the digital economy and the growing role of innovative factors in economic activity initiate the creation of fundamentally new forms of labor organization in the national economy, which fundamentally change the nature of work and the management system, ensure transparency, the degree of freedom and flexibility in the behavior of labor resources.

The concept of intellectual capital is constantly being improved under the influence of changes in the global space. Intellectual capital is a quantitative and qualitative characteristic that determines human ability and instrumental support to create products, services or added value.

In the structure of intellectual capital in the educational sector, three components should be distinguished:

- Human capital of the education sector – knowledge, skills, abilities, experience, creative thinking, innovative capabilities, moral values, intra-industry work culture, etc.

- Organizational-functional capital – licenses, certificates, patents, know-how, concepts, trademarks, technical and software assets, organizational-functional structure, intra-industry corporate culture, and so on.
- Interface capital – information and communication links with stakeholders (individuals and legal entities).

Thus, intellectual capital in the education sector is the aggregation of intra-industry knowledge, skills, abilities, intangible assets, and information and communication links used to meet diverse needs of individuals and society as a whole.

The main vector of the modern development of the educational industry and its business entities is aimed at the digital intellectualization of educational technologies and processes. We note that methodical approaches to the economic assessment of the intellectual component, as a basic factor that determines the competitiveness and economic sustainability of the educational sector and its business entities, do not meet the requirements for the assessment of the basic factor in intellectually rich activity, as a significant indicator socio-economic stability of the subject in the macroeconomic environment.

Intellectual capital is a socio-economic characteristic of the education sector that reflects its development and strategic potential. The contemporary features of creating and developing intellectual capital in the education sector include:

- Intellectual capital as a socio-economic component of the functional system of the education sector.
- Intellectual capital as a strategic asset of the education sector.
- A key factor in socio-economic transformations in the education sector.
- integration processes significantly influence the state and development of intellectual capital in the education sector.
- Intra-industry intellectual capital in the form of modern competencies serves as a reservoir of knowledge, skills, and abilities that are constantly accumulated and improved.
- The formation of intellectual capital in the education sector requires significant capital investment from stakeholders.

- The intellectual capital of the education sector, influenced by the factor of time, constantly changes its own value and depreciates.
- Effective utilization of intellectual capital in the education sector is monitored at all levels of intra-industry management.

In the works of Ukrainian researchers, the totality of objects that are part of intellectual capital is referred to as "assets," similar to the structure of tangible and financial resources in the Financial Statements of the economic entity (Balance Sheet). However, the term "asset" is associated with specific economic and legal attributes, which the core resource of intellectual capital—competencies, knowledge, skills, experience, etc.—does not possess. Therefore, in the study of intellectual capital in the system of reproduction and innovative development of the national economy and the education sector, it is expedient to use the term "assets" to accurately reflect the unique nature of these components.

Assets are tangible and intangible resources of the educational industry, which do not necessarily have liquidity and property objects. They include, in particular, assets that represent one of the parties in the Report on the financial condition of the business entity, which reflects in monetary terms all tangible and intangible resources that belong to it. In this case, the intellectual capital of the business entity covers both tangible assets and intangible assets such as licenses, accreditation certificates, patents, trademarks, operating technologies and computer programs, and intangible assets - competence, knowledge, skills, technical skills, business opportunities, reputation, etc.

The production of new intellectual assets is an effective task of the educational industry and its segments.

In the educational field, the higher education of new labor resources (as a set of systematized knowledge, abilities and practical skills, ways of thinking, professional, worldview and civic qualities, moral and ethical values, other competences in accordance with Article 1 of the Law of Ukraine "On higher education" dated July 1, 2014 No. 1556-VII), as well as new professional experience (knowledge) of scientific and pedagogical workers, which is accumulated and used during each educational cycle. The successful realization in professional activity by the graduates of their intellectual capabilities (resources), the formation of which was related to the ZVO, is

connected with one more of its intellectual assets, namely, with the business reputation and the emergence of new external connections (relationships), information channels [5].

Resources of intellectual capital in the education sector can be grouped into the following categories:

1. Intra-industry Human Assets: The aggregate of individual and collective competencies, knowledge, skills, experience, creative abilities, educational, technological, and managerial skills, communication links, and more.

2. Intra-industry Market Assets and Resources: Associated with operations in the market of educational services and ensuring competitiveness within the intra-industry environment. This includes assets (contracts and agreements, business cooperation, order portfolios, stakeholders) and resources (licenses, accreditation certificates, trademarks, goodwill, franchises, contracts, etc.).

3. Intra-industry Structural Assets and Resources: Ensuring the successful functioning of entities within the intra-industry environment. This includes assets (databases, intra-industry corporate culture, management strategy, information and communication technologies) and resources (patents, copyrights, software, etc.).

We emphasize that, depending on the specific situation, individual intellectual resources of the educational sector can simultaneously be an asset that has the appropriate book value and property rights, and assets that do not possess such properties.

The success of the innovative development of the national economy, based on knowledge, determined new ideas about capitalization, which for the educational sector is formed mainly on the basis of intellectual capital, which prevails over material capital. The most significant share of intellectual capital is human capital, which is formed in the educational process during the acquisition of appropriate education in an effective educational system, and ultimately determines the pace and quality of the development of the national economy.

The main types of capital investments in the intellectual capital of the educational sector:

- Expenditures on education focused on obtaining relevant educational and professional qualifications acquired through gaining general, professional, and integrative competencies.

- Expenditures on the formation of intra-industry structural assets and resources.

- Expenditures to ensure intra-industry market assets and resources.

The development of intellectual capital in the education sector depends on:

- Improvement of the education system.
- A well-founded state policy supporting the development of intellectual capital in the education sector.
- Addressing migration issues and complex demographic problems.
- Improvement of educational infrastructure.
- Development of partnerships in the education sector.
- Support for entrepreneurial initiatives in the education sector.
- Support for innovative and investment processes in the education sector.
- Strategies for the development of the education sector and its structural segments.

Intellectual capital is an intangible asset that transforms acquired human and intellectual potential into corresponding benefits:

- Socio-economic benefits for individuals and society.
- Financial and economic benefits for the education sector and the national economy.

Professor E. Kuznetsov systematically substantiated that "a feature of the modern stage of social and economic development of society is the process of formation and development of human capital, which, first of all, requires the development of new forms of professional management system. It is management that is a certain dominant force that forms a constantly higher level of human capital. Effective management activity creates an innovative format for the active formation of intellectual capital, which is, without exaggeration, the main factor in the competitiveness of modern development. In fact, a new concept of the development of the processes of professionalization of management activity is being created, which should ensure the effectiveness of management education, science and practice based on their system-integral interaction" [4].

Human capital plays the main role in the creation of intellectual capital in the educational sector due to the knowledge, skills and experience of employees, whose professional qualities are the mechanism for creating intellectual products. This forms the bulk of intra-industry intangible assets.

The intellectual capital of the educational sector is characterized by a higher degree of development

compared to other functional forms of capital, the criterion of which is a more stable level of intra-industry socio-economic growth and the efficiency of its structures.

Intellectual capital in the educational field, which develops on the basis of previous forms of capital, covers the main properties and at the same time has its own meaning, and is determined by the feature of functions:

- Availability and progressive development of intra-industry intellectual property;
- The formation of a creative type of thinking of employees in the educational field, scientists, management, forms and implements the main models of reproduction of each intra-industry specific socio-economic system and their aggregate.

It is necessary to state that the main purpose of the human capital of the educational sector, as part of the intellectual capital, is to create and spread innovations in the intra-industry environment.

With qualified management in the educational sector, the maximum effectiveness of investments in human capital significantly exceeds the results of investments in material capital.

The organizational-functional capital is that part of the intellectual capital of the education sector that defines intra-industry intellectual property, including:

- Intra-industry information processing procedures and technologies.
- Systems of intra-industry management, technical and software assets.
- Organizational-functional structure and patents, among other things.

Organizational-functional capital requires organizational and functional capabilities of the educational industry and its segments, compliance with the requirements of the educational services market, reveals factors of the use of human capital in organizational-functional systems, transforming the received information. The value of organizational and functional capital, like all intellectual capital of the educational sector, is determined by the efficiency of its use.

Interface capital visualizes information and communication links with stakeholders and sustainable relations with consumers of educational services.

One of the main goals of forming interface capital is to create a structure that allows stakeholders to communicate productively in an intra-industry environment.

The use of strategic potential and solving problematic issues of the functioning of the

educational sector is fundamentally possible only through the use of modern tools of strategic management of intra-industry intellectual capital, as well as with an adapted motivational-directed model taking into account the European system of the country's development. To solve these aspects, a system-oriented and comprehensive approach to the study of problems related to the system of strategic management of the educational sector at all levels using a competent and integrated approach is necessary.

The system of strategic management of intellectual capital in the education sector has a significant impact on the development strategy of the intra-industry environment. Therefore, let's highlight the key issues that need attention:

- Regulation of labor costs within the intra-industry environment.
- Comprehensive transformation of educational institutions at all levels.
- Modernization and extensive financial investment to enhance labor efficiency in the education sector.
- Consideration of the impact of socio-economic factors that may influence the strategic potential of the education sector.

Therefore, investment in the intellectual capital of the educational industry is a source of innovation and socio-economic growth in the consumer market of educational services. Investment and innovation support of the intellectual capital of the educational sector is significantly effective and efficient both from an intra-industry point of view and from the point of view of the national economy, because it provides a sufficiently high volume, long-term and integral socio-economic effect of capital investments in education branch.

Thus, the strategic management of intellectual capital in the educational sector should be focused on creating a favorable, justified, rational, purposeful, substantiated and smoothly functioning intra-industry management system with defined directions and interdependent vectors, which should adequately respond to the processes taking place in the educational sector.

The application of a system-functional approach in the reproduction and management of intellectual capital in the educational field provides an opportunity for a comprehensive study of the object of strategic management, to single out problem areas, to form operational, tactical and strategic tasks of the management process with a mandatory selection of the execution algorithm,

and to create a purposeful and effective system of intra-industry strategic management.

The main center of both fundamental and applied scientific research in Ukraine are national universities, which provide the basic basis for the formation and development of the intellectual capital of the educational sector. Therefore, higher education institutions of Ukraine need radical transformation, modernization and investment support, which will allow to create innovations in the relevant segments of the educational industry and the economic complex of the country.

The adoption of educational approaches and methods of knowledge transfer, which are largely based on information and communication technologies, has far-reaching consequences of a positive and negative nature. New educational technologies require significant capital investments in equipment and wired (wireless) networks, there will be significant costs for maintaining the educational infrastructure, training and training of personnel, as well as maintenance.

The country's innovative development requires radical transformations in the field of education, due to which the issues of effective management of the educational sector, its transition to an innovative path of development, i.e. to new concepts, models and mechanisms of intellectual capital management, become actualized. The problem of diagnosing and evaluating the intellectual capital of the educational sector, defining the main concepts, levers, methods, regulatory principles, models, tools and mechanisms of intra-industry management is intensifying. Modern scientific and technical knowledge is the greatest result when it is used within the framework of a complex intra-industry system and processes, in particular the integration of science and economic activity.

Innovative development of the national economy occurs when the knowledge economy develops and forms, and knowledge becomes the main source of strategic development, a transition from the simple accumulation of information to the formation of intellectual capital in the economic system occurs.

Thus, the transformation and conversion of the main components of intellectual capital in the educational sector and their main elements determine the process of formation and development of intra-industry intellectual capital. The formation of intellectual capital in the educational sector is carried out through the regrouping and management of intra-sectoral intellectual resources, the conversion of intellectual resources into other socio-economic or intangible resources, and the

purpose of this process is to contribute to increasing the value of the educational sector for the national economy and society.

Ensuring the priority expanded reproduction of intellectual capital in the educational sector is a complex task that can be solved by joint intra-industry efforts, as well as by state, regional and local authorities, which will contribute to the innovative development of the national economy. The education sector should develop a system of professional and technical education, which will significantly ensure the growth of intellectual potential and capital on a national scale, and economic entities will receive competitive labor resources through adaptation to their operating conditions within the scope of advanced training, retraining, certification, etc., which will ensure the formation of , development and will reproduce the intellectual capital of the educational sector and the economic system of the country as a whole.

References

1. Ilyashenko S.M., Golysheva Y.O., & Kolodka A.V. (2017) *Upravlinnya intelektual'nym kapitalom pidpryyemstva.* [Management of Intellectual Capital of the Enterprise.] Luhansk, Ukraine: TOV "Tritoria". [in Ukrainian]

2. Kovtunenko K.V., & Skorokhodova L.V. (2013) *Osoblyvosti obliku ta otsinky intelektual'noho kapitalu yak chynnyka innovatsiynoho rozvytku promyslovoho pidpryyemstva.* [Features of Accounting and Evaluation of Intellectual Capital as a Factor of Innovative Development of an Industrial Enterprise.] Sumy, Ukraine: Vid-vo "Noulidzh". [in Ukrainian]

3. Kozub V.P. (2009) Teoretychni aspekty formuvannya intelektual′noho kapitalu. [Theoretical aspects of intellectual capital formation.] *Problemy systemnoho pidkhodu v ekonomitsi, 2.* Retrieved from http://www.nbuv.gov.ua/e-journals/PSPE/2009_2/Kozub_209.htm [in Ukrainian]

4. Kuznetsov E.A. (2017) *Metodolohiya profesionalizatsiyi upravlins'koyi diyal'nosti v Ukrayini.* [Methodology of Professionalization of Management Activity in Ukraine.] Kherson, Ukraine: Oldi Plus. [in Ukrainian]

5. Khaustova Y.B. (2018) *Klasyfikatsiya intelektual'nykh aktyviv vyshchoho navchal'noho zakladu.* [Classification of intellectual assets of the higher education institution.] Retrieved from http://www.economy.nayka.com.ua/pdf/9_2018/42.pdf. [in Ukrainian]

6. Stewart T.A. (2004) *Intellectual Capital: The New Wealth of Organizations.* New York-London: Doubleday / Currency.

7. Stuart T.A. (1997) *Intellectual Capital: The New Wealth of Organizations.* London, UK.

MEASURING THE STOCK OF HUMAN CAPITAL IN HEALTH CARE

Mykhailo Danylko

Postgraduate,

International Scientific and Technical University

named after academician Yury Bugai

Kyiv, Ukraine

Valeriia Liashchenko-Shcherbakova

Postgraduate,

International Humanitarian University

Odesa, Ukraine

Abstract

The article considers the definition of the stock of human capital. According to the authors, human capital represents the quality and quantity of the labor of the industry. The authors analyzed the indicators of measuring the stock of human capital, as well as approaches to its assessment. The category of human capital was considered within the health care industry. Human capital stock measures should provide insight, or signals, into the level of human capital supporting the industry.

Keywords: human capital, stock of the human capital, measuring the stock of human capital.

The phenomenon of human capital today has penetrated so much into all spheres of social and economic life of society that we can no longer fully embrace this socioeconomic phenomenon without analyzing its investment attractiveness. Investments in the human capital of the healthcare sector of Ukraine are extremely important in the conditions of military aggression of the Russian Federation against Ukraine, high natural and migratory losses of human resources of the country, a high level of disability and mortality due to the participation of medical personnel in hostilities, psychological and professional burnout of medical workers. In view of this, in our

author's opinion, the formation of such a definition as a "stock" of human capital of the industry is being actualized today.

By the "reserve" of human capital we mean the level of knowledge, skills and competencies that individuals possess at any given time. The distribution of the "stock" of human capital, that is, the distribution of knowledge and skills, is important for the participation of an economically active (that is, able-bodied) population in all socio-economic processes of society and access to work and income. The total "stock" of human capital within a country affects its development, prosperity and international competitiveness of the country. Consequently, the state is interested both in the general growth of the "stock" of human capital, and in how specific skills and competencies are distributed among the population of the country. And since the healthcare industry is one of the country's forming human capital, the formation of a "stock" of human capital in this industry should be a priority for investing in the country's human capital.

Analyzing the phenomenon of human capital, we understand that its "reserve" is heterogeneous, since no factor or characteristic of human existence can comprehensively and comprehensively reflect all human characteristics that affect economic activity. We agree with the opinion of scientists [1; 4] that human capital is more than the sum of its parts, and that the identification and measurement of the finite aggregate of specific knowledge, skills and competencies cannot provide a complete analysis and evaluation of human capital. The ability of individuals and professional groups to combine these skills and use them for productive use, which is associated with social capital, is crucial to the overall picture of the formation and use of human capital, although it is difficult to measure in any quantitative form.

It is rather difficult to accurately measure the "reserves" of individual human capital, since a complex set of human qualities that form economic value is difficult to quantify. Having analyzed various scientific sources, we came to the conclusion that there are three approaches to assessing the "reserves" of human capital of the able-bodied population:

I. The first approach is to evaluate human capital through the highest level of education, that is, the educational level can act as a rough estimate of the "stock" of human capital.

II. The second approach uses various direct tests to determine and analyze certain characteristics and attributes of an economically active individual that affect his economic activity.

III. The third approach is aimed at analyzing the differences in the income structure of the able-bodied population of the country, which scientists associate with specific individual characteristics in order to assess the market value of these attributes, and therefore the total value of human capital.

However, in our opinion, each of these approaches has a number of disadvantages. Thus, the first approach, analyzing the educational level of the population, can be used as an intermediate method of analyzing the "reserves" of human capital, since it does not directly consider the attributes of human capital, but rather evaluates the educational levels that are generally associated with some forms of economically significant knowledge, skills and competencies. This approach does not take into account other forms of education, such as non-formal and information education, nor the skills and abilities that were acquired after the completion of formal education, nor does it assess the indicators of increase and survival of knowledge due to the lack of their use. The second approach, which uses direct tests, evaluates different characteristics of the working-age population at a particular point in time. This indicates the complexity of measuring human capital through its versatility (that is, various attributes that are difficult to assess at the aggregate level, for example, motivation to work, attitude to certain economic processes, etc.). The third approach is aimed at eliminating the shortcomings of the first and second through assessing the degree to which measurable attributes constitute human capital in the sense of added economic value. That is, through an assessment of the remuneration they receive in the labor market: how much more can a person earn with a certain qualification or competence than without them? Thus, we can estimate the "stock" of human capital in monetary terms. However, this indicator is based on the assumption that the differences in the analyzed earnings accurately reflect the difference in productivity due to the level of education or skill level that can be measured. In practice, such ties may be weak, especially in the labor market of Ukraine, when the level of wages does not correspond to the qualifications and work performed in various economic spheres of society.

Therefore, in order to specifically calculate the "reserves" of human capital, a certain measurement of how much such attributes are worth in practice in economic terms is required. One way to quantify human capital is to aggregate the higher incomes of individuals associated with certain qualities. There have been attempts to develop a measure based on income from

work (LIB), based on the difference in income associated with the value of educational level [4].

The ratio of wages of workers with higher and lower education is a measure of the human capital of the former. After weighing different segments of the labor force by the ratio of wages of industry (country) professionals with different educational levels, you can get an index of the cost of the average "stock" of human capital of the industry (country) [4].

Indicators of the "stock" of human capital, based on income from labor, have the advantage of direct comparison with indicators of physical capital. This approach depends on a number of important assumptions, which include: (1) that employment income is a valid indicator of marginal productivity and return on human capital; and (2) ideal substitution between different individuals with low levels of human capital.

The first assumption may be less true for countries where the difference in income is significantly influenced by institutional factors, such as agreements and regulations on the minimum wage, tariff categories (such as in Ukraine). The second assumption may be questionable on the grounds that human capital is very different in different individuals, and that there are obstacles to mobility or substitutability of labor at a low educational level. However, indicators based on labor income (LIB) have the advantage of allowing the relative productivity of workers to change over time and in different countries (provided that wages are a good benchmark of marginal productivity), and they do not assume that workers with the same educational level necessarily have the same level of qualification.

Events of this kind have so far been limited to individual countries, but the studies conducted to date are indicative. Mulligan and Sala y Martin [5] in their research used a measure based on the educational level of the workforce and the proportion of different groups in labor income. They found that U.S. states that had the lowest "reserves" of human capital in the initial period had the largest growth over time. They also found that over the period 1940-90. "reserves" of human capital grew in the United States twice as fast as was predicted by indicators based only on average years of study. In addition, the spread of human capital increased in the United States during the 1980s, while the spread of the average school year decreased. This latter finding is indicative of the challenge to the conclusion that income inequality in the US in the 1980s could not have been linked to human capital as its distribution became more uniform.

Measuring the "stock" of human capital based on labor income takes into account only the

market value of human capital. A study by Jorgenson and Fraumeni [3] estimated the market and non-market value of human capital for the United States, in terms of the future flow of additional wages to different groups according to age, gender, and labor market status. To this is added a conditional value for non-market time. Alroth, Björklund and Forslund [2] use a similar estimate for Sweden. Investing in human capital, when you consider its impact outside the market, can be more valuable than physical capital, and much more than the cost of time spent working. Alroth, Björklund and Forslund found that, even if rest income and income tax were excluded, the value of human capital exceeded the value of physical capital. [2]

The "stock" of human capital cannot be fully measured by the sum of the qualities of individuals. In practice, ways to develop and apply skills and knowledge in the economy also depend on a number of other variables, including social capital and the culture of organizations. It is difficult to aggregate these variables into reliable indicators. However, investment in knowledge development significantly affects the degree to which human competence can be transformed into productive economic activity. Thus, in addition to indicators of human capital based on the educational level and analysis of differences in income structure, it is useful to compare the "stock" of highly qualified "knowledge producers" in the economy. One way to measure this indicator is to compare the number of research personnel and the workforce.

Above we have analyzed the concept of "stock" of human capital within the country (nation), but we consider it expedient to use this approach within the sectors of the economy (in our case - in the field of health). This will allow us to analyze the human capital of the industry in more detail in order to make appropriate strategic decisions on investing in it.

Since human capital is not homogeneous, cannot be expressed using any single indicator, and is also unevenly distributed in the country itself and in the branches of the national economy, we generalized the set of measured indicators of the "stock" of human capital. In our opinion, the approach based on the analysis of educational level will continue to be widely used, as it continues to be the most accessible indicator of the analysis of the "stock" of human capital in a wide range of different data sources, and also as it positively correlates with directly measured skills and wages. Therefore, we summarized the set of indicators in Table 1, which are based on the analysis of educational level.

Table 1

Indicators of human capital "stock" valuation

Indicators	**Indicator value**	**Usefulness and limitations**	**Baseline data**
(1) The educational level of the able-bodied population.	Percentage of individuals who have completed secondary and higher education.	Internationally standardized indicator of the achieved level of education. Does not measure a specific set of knowledge and skills.	OECD collects comprehensive data on all countries based on the definitions of the International Standard Classification of Education (ISCED).
(2) Average "years of study" of the able-bodied population.	Average number of years of primary, secondary and higher education.	Gives a single figure of the "stock" of human capital based on educational level. The year of study is accepted as a permanent unit regardless of the level. Does not measure a specific set of knowledge and skills.	Baseline data as for (1) but based on an estimate of the average number of years associated with each educational level.
(3) The educational level of the able-bodied population by age.	Percentage of those who received at least complete secondary education in the age groups 25-34 and 35-64.	Indicates the difference between generations due to changes over time in the level of youth achievement. It does not separate the effect from education.	Baseline data as for (1)

(4) Educational level and qualification level per article.	Differences between men and women a) in achieving higher education among the population aged 25-64 years and b) in qualification levels.	Compares historical gender biases with current trends in education systems.	Baseline data as for (1)
(5) "Gaps in education between generations".	The ratio of the population with complete secondary and complete higher education in the age groups 25-34 and 35-64.	It gives a sign of educational mobility between generations, which is relevant both to equality of opportunity and to the prospect of improving total human capital.	Baseline data as for (1)
(6) General distribution of literacy skills among the adult population.	Percentage of the population who received different levels of education.	Gives a direct measurement of a skill set with economic significance. It's a sign of how education and other experiences explain these skills.	Baseline data as for (1)
(7) Literacy by branch of economic activity.	Percentage of workers by industry with high (level 4/5) and low (level 1/2) literacy levels.	It shows that the level of literacy is usually the highest in science-intensive sectors of the economy.	Baseline data as for (1)

(8) Literacy by educational level.	Average literacy score in each country (region) of individuals with an appropriate educational level.	Shows how education affects the level of literacy in each country (region), and also allows you to compare the level of literacy in different countries (regions) among individuals with a similar educational level.	Baseline data as for (1)

References

1. Borshch V.I. (2020) *Upravlinnya kapitalom u systemi okhorony zdorov"ya: teoriya ta metodolohiya: dys. d. e. n.* [Management capital in the health care system: theory and methodology: dissertation for the degree of Doctor of Economic Sciences.] Chernihiv, Ukraine. [in Ukrainian]

2. Ahlroth S., Björklund A., Forslund A. (1997) The output of the Swedish education sector. *Review of Income and Wealth, Series 43, No. 1*, pp. 89-104.

3. Goode R. B. (1959) Adding to the Stock of Physical and Human Capital. *The American Economic Review. Vol. 49, No. 2, Papers and Proceedings of the Seventy-first Annual Meeting of the American Economic Association (May, 1959),* pp. 147-155.

4. (2016) *Guide on Measuring Human Capital. Prepared by the Task Force on Measuring Human Capital. UNECE.* Retrieved from: https://unece.org/DAM/stats/publications/2016/ECECESSTAT20166_E.pdf

5. Jones B. F. (2014) The Human Capital Stock: A Generalized Approach. *The American Economic Review. Vol. 104, No. 11*, pp. 3752-3777.

6. Jorgenson D., Fraumeni B. (1993) Education and productivity growth in a market economy. *Atlantic Economic Journal, June, Vol. 21, No. 2*, pp. 1-25.

7. Huggett M., Kaplan G. (2016) How large is the stock component of human capital? *Review of Economic Dynamics, Vol. 22,* pp. 21-51. Retrieved from: https://doi.org/10.1016/j.red.2016.06.002.

8. (1998) *Human capital investment. An International Comparison. Centre for Educational Research and Innovation.* Retrieved from: https://www.oecd-ilibrary.org/docserver/9789264162891-en.pdf?expires=1700118457&id=id&accname=guest&checksum=F41CF5E8C49772B8BC94DFA463DDAF9F

9. Mulligan C. B., Sala-I-Martin X. (1995) Measuring aggregate human capital. *NBER Working Paper No. 5016.* Cambridge, MA.

10. (2016) Neoclassical Models in Macroeconomics. *Handbook of Macroeconomics, Vol. 2, pp. 2043-2130*. Retrieved from: https://doi.org/10.1016/bs.hesmac.2016.04.010

DIGITAL TRANSFORMATION IN EDUCATION

Tetiana Sharova

Doctor of Philological Sciences, Professor,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Yuriy Safonov

Doctor of Economic Sciences, Professor,

Deputy Director,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Abstract

The article deals with the issue of digital transformation in education. It is mphasized that an important aspect in the modern world is the integration of digital technologies into the educational space of an educational institution. The skills necessary for a modern person in the era of digitalization are presented, and the strategic priorities of digital transformation in education are indicated. The study contains the criteria for digital content, as well as the factors that determine the pace of development of the digital space.

Keywords: digital transformation, digital space, content, educational process, quality of knowledge.

Formulation of the problem. Digitalization of the educational space and informatization significantly change the understanding of the modern educational process in an educational institution of any level: general secondary, vocational, professional pre-university and higher education. Modern processes of the digital society allow for open access communication without

restricting the teaching and research staff, as well as students. This greatly expands the opportunities for students who want to learn and systematically exchange information [2, p. 40].

The purpose of the study. Digitalization is a significant factor in the development of economic, social, political and cultural relations in our country, especially in the context of the full-scale invasion of Ukraine by russia, when most educational institutions were forced to switch to a distance learning format. However, according to V. Areshonkov, the current requirements for the organization of distance learning today require significant changes [1, p. 4]. At the same time, we understand that distance learning should be based on different principles and principles than traditional teaching. In any case, the transition of educational institutions from traditional teaching to innovative teaching involves a number of measures at all levels, including organizational, social, regulatory, ideological, economic, etc.

Introduction. The following scholars have paid attention to the issues of digital space in modern scientists: L. Havrilova, Ya. Topolnyk, I. Kucherak, T. Kryvorot, M. Pryhodii, A. Rastryhina, S. Tolochko, S. Sharov, V. Shynkanova, O. Bilychenko, V. Areshonkov and others. Aspects of digital strategy as a component of the social and communication space of a higher education institution are considered in the study of Bilychenko O., Researchers L. Havrilova, Ya. Topolnyk consider in their scientific work digital culture, digital literacy, digital competence as modern educational phenomena. O. Sakhno reveals the issues of digital competence and technologies for education, pointing out the main principles and tools. As we can see, aspects of the digital space are interesting to scientists from different perspectives. However, to date, the issue of digital competence of teachers in the context of digitalization of educational institutions and distance learning has been partially studied, which allows us to speak about the relevance of this issue.

Presenting the main material. Since the beginning of russia's full-scale invasion of Ukraine, most educational institutions have switched to distance learning for security reasons. An important aspect here is the integration of digital technologies into the educational space of the educational institution. The current conditions have forced the administration of educational institutions to outline an action plan for entering the digital space through ICT:

– Use of digital technologies for teaching and learning;

– Development of digital skills and competencies;

– Application of analytical analysis and forecasts in education [7, p. 32].

V. Nikitenko, R. Oleksenko, O. Kyvliuk emphasize the formation of the values of digital education and digital human in a digitalized society, each time focusing on the skills of a modern person [6, p. 53]. When assessing the digital modern space, we understand that this will primarily concern each individual, since it is the human factor that will allow us to build the concept of digitalization and the human being at the center of digitalization. That is why the following skills are necessary for a modern person:

– Critical thinking;
– Financial literacy;
– Leadership;
– Initiative;
– Flexibility;
– Creativity;
– Digital literacy;
– Stress resistance.

In view of the above, we emphasize that pedagogical and scientific and pedagogical workers should always learn and master new competencies in order to be flexible, which will allow them to have modern and practical cases that can be used in the educational process during distance learning.

For example, T. Kryvorot and M. Pryhodii focus on training teachers to use digital Internet technologies in the educational process [4, p. 33]. It is clear that such training should take place in accordance with approved educational programs for professional development and be conducted by leading specialists who have experience with digital tools. I. Kucherak once emphasized that digitalization has a powerful impact on the educational space in the context of the formation of key competencies [5, p. 91]. In this aspect, it is important to understand that continuous learning through online courses, participation in trainings, workshops, webinars will allow you to be in trend and teach modern youth, using digital content that will significantly improve the quality of knowledge of students and motivate them to learn.

In today's world, digital transformation in education has certain strategic priorities, which are reduced to a number of positions, including

– Large-scale access to information;
– Acceleration of digital literacy;
– Blockchain in education;
– Expanding the boundaries of artificial intelligence.

Researcher S. Tolochko emphasizes that large-scale access to information includes not only access to information on a free basis, but also the further use of information without any restrictions [10, p. 30]. In her research on digital technologies in education, M. Tolmach focuses on the possibilities and trends of application, emphasizing different approaches to the teaching staff and the use of digital tools by students [9, p. 159].

As of today, the main directions of the digital space have been identified:

1. Development of digital education (digital equipment, development of digital potential, modern organizational capabilities, digitally competent teachers, high-quality educational content, user-friendly tools and secure platforms).

2. Improving digital skills and competencies for digital transformation (basic digital skills and competencies from an early age, digital literacy, computer education, knowledge and understanding of artificial intelligence technologies, advanced digital skills, and an increase in IT specialists).

While studying at an educational institution, students acquire certain competencies that allow them to use information correctly, search for it, and analyze it in the future. In the future, the experience gained will allow them to exchange data and communicate at different levels [8, p. 11]. But at the same time, it is necessary to navigate the digital space in order not to lose a number of priority areas aimed at economic development and progress in general. Modern researchers have identified the key areas of digitalization in the modern space:

– Reliable infrastructure;
– Digital literacy;
– Digital competence and skills for teachers;
– Assessment and approaches to assessment using digital technologies;
– Artificial intelligence technologies [13, p. 119].

In the modern world, there are well-known criteria for digital content:

– Forms of presentation of educational material and multimedia (free of charge, visualization, consideration of age peculiarities);

– The structure of information presentation (ease of navigation, availability of contextual hints, the possibility of simultaneous training of a group of students);

– Interaction with the learning context (creation of tools and services for work (bookmarks, notes, individual elements);

– Variability of the content of educational material (selectivity, implementation of individual educational trajectory, differentiation of learning, visual context, principles of variability) [11, p. 136].

At the same time, researcher O. Sakhno, analyzing the experience of using digital technologies, emphasizes the criteria that determine the optimality of using digital resources: multifunctionality, unification, localization and confidentiality [8, p. 12]. L.Havrilova, Ya. Topolnyk emphasize digital culture, digital literacy, and digital competence as modern educational phenomena. Researchers point to the rational consumption of information, critical thinking, digital literacy, and also use the term IT volunteering, which allows the use of ICT to improve the world around us [3, p. 5]. In view of the above, we understand that the digitalization of education depends on:

– The pace of development of artificial intelligence;

– Ensuring the mobility of information and communication activities of users in the information space;

– Introduction of blockchain and cryptocurrency technologies;

– Development of cloud computing and virtualization;

– Development of new functions of augmented reality;

– Widespread use of chatbots;

– Development of user characteristics of Internet people;

– Formation of the Internet of Things;

– Development of robotics;

– Development of the software industry;

– Development of data protection systems in information systems and counteraction to cybercrime;

– Development of a network of Internet service providers;

– Ensuring the compatibility of ICT tools and ICT applications.

Having switched to the distance learning format, educational institutions work on educational portals in the Moodle system. This learning format allows the use of ICT tools and active involvement of students in the learning process. Moreover, today the work on the educational portal is effective in terms of connecting students, regardless of their location (in Ukraine, in the temporarily occupied territory of Ukraine, abroad) [12, p. 237]. This issue is also relevant for preschool education institutions, in particular for the teaching staff.

In her scientific works, researcher V. Shynkanova considers the issues of the principles of forming a digital educational space to improve the quality of training of future teachers of preschool education institutions, emphasizing new approaches to the educational process in preschool institutions [14, p. 311].

Conclusions. The digital educational space in modern conditions with high-quality content motivates students to learn. By mastering new digital tools and using them in practice, pedagogical and scientific and pedagogical workers significantly improve their level of competence and join the digital transformation in education.

In the future, we see the need to address the issue of professional development of pedagogical and scientific-pedagogical staff in the context of the full-scale invasion of Ukraine by the Russian Federation on the issues of mastering digital tools in educational institutions of different levels and forms of ownership.

References

1. Areshonkov V. (2020) Tsyfrovizatsiia vyshchoi osvity: vyklyky ta vidpovidi. [Digitization of higher education: challenges and answers]. *Visnyk Natsionalnoi akademii pedahohichnykh nauk Ukrainy, No. 2(2)*, pp. 1-6. [in Ukrainian]

2. Bilychenko O. (2020) Tsyfrova stratehiia yak skladnyk sotsialno-komunikatsiinoho prostoru zakladu vyshchoi osvity. [Digital strategy as a component of the social and communication space of a higher education institution]. *Profesionalizm pedahoha: teoretychni y*

metodychni aspekty, No. 15, pp. 37-46. [in Ukrainian]

3. Havrilova L., Topolnyk Ya. (2017) Tsyfrova kultura, tsyfrova hramotnist, tsyfrova kompetentnist yak suchasni osvitni fenomeny. [Digital culture, digital literacy, digital competence as modern educational phenomena]. *Informatsiini tekhnolohii i zasoby navchannia. 61, Issue 5*, pp. 1-14. [in Ukrainian]

4. Kryvorot T., Pryhodii M. (2022) Treninhova pidhotovka pedahohichnykh pratsivnykiv do zastosuvannia tsyfrovykh internet-tekhnolohii u osvitnomu protsesi. [Training preparation of pedagogical workers for the use of digital Internet technologies in the educational process]. *Professional Pedagogics, No.1(24)*, pp. 33-41. [in Ukrainian]

5. Kucherak I. (2020) Tsyfrovizatsiia ta yii vplyv na osvitnii prostir u konteksti formuvannia kliuchovykh kompetentnostei. [Digitization and its impact on the educational space in the context of the formation of key competencies]. *Innovatsiina pedahohika, No. 22*, pp. 91-94. [in Ukrainian]

6. Nikitenko V., Oleksenko R., Kyvliuk O. (2022) Formuvannia tsinnostei tsyfrovoi osvity i tsyfrovoi liudyny u didzhytalizovanomu suspilstvi. [Formation of values of digital education and digital man in a digitalized society]. *Humanities Studies, No. 10 (87)*, pp. 53-63. [in Ukrainian]

7. Rastryhina A. (2018) Intehratsiia tsyfrovykh tekhnolohii u mystetskyi osvitnii prostir VNZ. [Integration of digital technologies into the artistic educational space of the university]. *Naukovi zapysky [Tsentralnoukrainskoho derzhavnoho pedahohichnoho universytetu imeni Volodymyra Vynnychenka]. Seriia: Pedahohichni nauky, No.163*, pp. 32-38. [in Ukrainian]

8. Sakhno O. (2020) Tsyfrova kompetentnist i tekhnolohii dlia osvity: pryntsypy ta instrumenty. [Digital competence and technologies for education: principles and tools.]. *Imidzh suchasnoho pedahoha, No. 6 (195)*, pp. 10-14. [in Ukrainian]

9. Tolmach M. (2021) Tsyfrovi tekhnolohii v osviti: mozhlyvosti y tendentsii zastosuvannia. [Digital technologies in education: possibilities and trends of application]. *Tsyfrova platforma: informatsiini tekhnolohii v sotsiokulturnii sferi, No. 4(2)*, pp. 159-171. [in Ukrainian]

10. Tolochko S. (2021) Tsyfrova kompetentnist pedahohiv v umovakh tsyfrovizatsii

zakladiv osvity ta dystantsiinoho navchannia. [Digital competence of teachers in the conditions of digitization of educational institutions and distance learning]. *Visnyk Natsionalnoho universytetu "Chernihivskyi kolehium" imeni TH Shevchenka. Seriia: Pedahohichni nauky, No. 13(169),* pp. 28-35. [in Ukrainian]

11. Sharov S.V. (2023) Suchasnyi stan rozvytku shtuchnoho intelektu ta napriamky yoho vykorystannia. [The current state of artificial intelligence development and directions of its use]. *Ukrainski studii v yevropeiskomu konteksti: zb. nauk. pr., No. 6*, pp. 136–144. [in Ukrainian]

12. Sharova T. M. (2022) Osvitnii portal yak efektyvnyi zasib zabezpechennia dystantsiinoho navchannia zdobuvachiv vyshchoi osvity. [The educational portal as an effective means of providing distance learning for students of higher education]. *Ukrainski studii v yevropeiskomu konteksti: zb. nauk. pr., No. 5*, p. 237–244. [in Ukrainian]

13. Sharova T.M., Sharov S.V. (2019) Elektronne navchannia: diievyi format osvity. [E-learning: effective format of education]. *Akademichna kultura doslidnyka v osvitnomu prostori: yevropeiskyi ta natsionalnyi dosvid: zb. materialiv II Mizhnar. nauk.-prakt. konf. (*16-17 travnia 2019 r., m. Sumy), pp. 119-123. Sumy, Ukraine. [in Ukrainian]

14. Shynkanova V. (2022) Zasady formuvannia tsyfrovoho osvitnoho prostoru dlia pidvyshchennia yakosti pidhotovky maibutnikh vykhovateliv zakladiv doshkilnoi osvity. [The principles of forming a digital educational space for improving the quality of training of future teachers of preschool education institutions]. *Naukovyi visnyk Uzhhorodskoho universytetu. Seriia: "Pedahohika. Sotsialna robota", No. 1 (50)*, pp. 311-314. [in Ukrainian]

NEW UKRAINIAN SCHOOL IN THE SPACE OF DEVELOPMENT OF PEDAGOGICAL INNOVATION

Svitlana Kyrylenko

Candidate of Pedagogical Sciences,

Head, Department of Innovation and

Research and Experimental Work,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Abstract

The article is devoted to the actual problem of introducing innovations into the educational practice of the New Ukrainian School, the origin of pedagogical innovation in general secondary education institutions of Ukraine as a socio-pedagogical phenomenon is highlighted.

General innovative trends in the context of European integration and globalizing world processes in the field of education, pedagogical innovation, and implementation of innovative practices in the activities of general secondary education institutions based on modern methodological approaches are analyzed; peculiarities of development and their implementation in educational activities.

Prerequisites for the introduction of pedagogical innovations, innovations in the educational space of the New Ukrainian School, theoretical and practical trends in the development of educational innovations, their implementation in modern conditions by teachers-innovators of educational institutions who are directly engaged in innovative methods, developments, recommendations, generalization of pedagogical innovations are defined. After all, the innovative orientation of pedagogical activity implies the inclusion of teachers in the process of creating, mastering, and using pedagogical innovations in the practice of teaching and education, creating a certain innovative environment in an educational institution.

Keywords: innovations, pedagogical innovation, educational space, New Ukrainian school.

Formulation of the problem. The priority principles of modern education in many countries of the world are the implementation of modern innovative educational practices, the driving force of which is the rapid growth of the role of the person seeking education, and the humanization and democratization of society. The introduction of innovative innovations into the educational process of institutions of general secondary education is always associated with changes in the social environment of society, teachers' reassessment of the meaning and style of their professional activities, the need to build new models of interpersonal relations, since only innovative education, by its very nature, can prepare a child, able and willing to actively create and accept changes.

Despite the difficult conditions of martial law, the activity of general secondary education institutions is characterized by an active search for new development strategies that would best meet the needs and requirements of modern society, and Ukrainian teachers strive to organize the educational process so that as many as possible of those seeking education have the opportunity to receive a thorough, high-quality education. The opportunity to achieve success in education, and self-realization in adult life, because only a successful person is able to actively influence the dynamic development of the country.

The 21st century is called an important period in the development of pedagogical science. At this time, there is generalization, systematization, and structuring of pedagogical empirical knowledge, creating integral scientifically based systems for the organization of educational practices; and the formation of pedagogy as a science. In domestic pedagogical research, significant attention is paid to the innovative activity of the teacher, aimed at the introduction of new pedagogical practices, a personally oriented approach to education and upbringing, to the humanization and democratization of the educational process, which was reflected in the reform of Ukrainian education.

The reform taking place in education, the Law of Ukraine "On Education" (2017), "On Comprehensive General Secondary Education" (2020), and the Concept of the New Ukrainian School (2018) determine the main vectors of innovative changes, and taking into account the criteria of the quality of education at the world level, which are outlined in PISA, make it possible to predict ways of integrating Ukrainian education into the global space. To a large

extent, the effectiveness of the implementation of innovative activities of institutions of general secondary education, and the development of pedagogical innovation is determined by its organization in accordance with modern models of innovative processes.

According to L. Pukhovska, building innovative education is a strategic goal of every EU member state. At the European level, the thematic network “Innovations in Vocational Education and Training” launched by the European Center for the Development of Vocational Education and Training (CEDEFOP) in 2014 became an important tool for the spread of innovative educational practices. Its leading idea is innovations in the labor market, which give a new form to professional education and training, contributing to its dynamism and innovation.

The standards defined by the Concept of New Ukrainian Education lay down fundamentally new approaches to the educational process in educational institutions, motivating teachers to reorient their attention to the formation of the competencies of education seekers, moving away from the traditional methods of “simple transfer of knowledge” because it is quite clear that a modern teacher must possess the skills of creative searches that are closely related to pedagogical research.

According to V. Sydorenko, “the educational community received creative modernization challenges, which change the social and professional mission of the teacher in the context of European professionalism while preserving the best mental Ukrainian characteristics, the characteristic feature of which is the development of pedagogical innovation” in the implementation of the Concept of the New Ukrainian School [8].

Analysis of recent research and publications. A review of the research of outstanding domestic and foreign scientists shows that scientists pay considerable attention to the issues of innovations, innovations, and innovative practices in education. In their works, they came to unity in the understanding of “integrity and systematicity in the study, organization of education and upbringing of children”, however, in order for the conclusions of the pedagogical investigations of scientists to become scientific statements, it is necessary for them to become a worldview principle of the study of reality, which in the future requires a certain time regarding rethinking the principles of studying pedagogical phenomena, objects, processes.

Scientists who dealt with the problems of the theory and practice of pedagogical innovation (V. Andrushchenko, I. Beh, A. Boyko, O. Zakharenko, V. Sukhomlynskyi, O. Sukhomlynska,

etc.) were unanimous in their conclusions that reforming the system of modern education can not to rely on innovative processes, in particular, to take place without taking into account the results of creative searches of innovative teachers, analysis of their activities.

The theoretical substantiation of the problem of innovations and advanced pedagogical experience was carried out by well-known domestic scientists (A. Boyko, I. Dychkivska, N. Dychek, O. Lavrinenko, V. Palamarchuk, D. Pashchenko, O. Savchenko, O. Sukhomlynska, etc.) and foreign scientists (K. Angelovsky, X. Barnet, D. Hamilton, N. Gros, U. Kingston, N. Lagerwey, M. Miles, A. Nichols, A. Haberman, R. Havelock, etc.).

The problem of implementing the latest pedagogical experience was motivated by relevant scientific research by A. Boyko, N. Demyanenko, I. Zhernosek, M. Krasovytskyi, L. Momot, V. Palamarchuk, O. Pasichnyk, N. Chepurnoi, O. Filonenko, M. Yarmachenko and others.

According to their conclusions, innovations that are the result of systematic searches, generalization of pedagogical experience, development of its approbation scheme and implementation model are of particular importance in modern educational and reform transformations related to the development of a new Ukrainian school, innovative development of pedagogical education in Ukraine, and have deep domestic historical background and European roots, which allows to consider and interpret it as a systemic movement in education.

The purpose of the article is to define the concept of innovation, to introduce it into the educational practice of the New Ukrainian School, and to generalize theoretical information about the origin of pedagogical innovation in general secondary education institutions of Ukraine.

Presentation of the main research material. Innovations in education are a consistent, understandable phenomenon, dynamic in nature and developmental in results, the introduction of which allows solving many contradictions between the traditional system of fixed requirements in educational institutions and the needs for qualitatively new education, because the spread of pedagogical innovations, innovation, and modern educational practices is necessary to create favorable conditions.

The historical and pedagogical phenomenon known as “advanced pedagogical experience”, “pedagogical innovation”, “innovative pedagogical activity”, and “pedagogical innovation”

played a significant role in these transformations in Ukraine is a feature of the intellectualization of teachers' work, the introduction of modern methods, which is a changing technology in all spheres of education.

In the Great Explanatory Dictionary of the Ukrainian Language, the concept of "novation" (lat. novation - renewal, change) is a product of the intellectual activity of people, a formalized result of fundamental, applied, or experimental research in any field of human activity, aimed at increasing its efficiency. Innovations are knowledge: new ideas, theories, models, discoveries, inventions, processes, structures, methods, standards, technologies, etc. [1]. However, not all knowledge has practical value. They become an impetus for transformations only under the conditions when they take the form of innovations capable of renewing productive forces, creating prerequisites for technological and production changes. An innovation, after being accepted for implementation and distribution, acquires a new quality, it becomes an innovation.

I. Dychkivska proposes to distinguish between the concept of "innovation" ("new tool") as a specific tool (new ideas, methods, techniques, technologies, programs, etc.) and "innovation", which is broader in meaning, as it means a process, the subject of which is innovation [2].

Many researchers paid considerable attention to the study of the issue of pedagogical (educational) innovation, an attempt to substantiate it in domestic pedagogical science. In the writings of the Ukrainian researcher V. Palamarchuk, "pedagogical innovations are the result of a creative search for original, non-standard solutions to various pedagogical problems" [5, p. 59].

An essential feature of innovation, according to L. Vashchenko, is "its ability to influence the general level of a teacher's professional activity, to expand the innovative field of the educational environment in an educational institution, because the source of innovation is a purposeful search for an idea with the aim of resolving contradictions, its development takes place through approbation in the form of a pedagogical experiment or pilot implementation" [3].

The Encyclopedia of Education states that "innovations in education is the process of creation, introduction, and dissemination in educational practice of new ideas, tools, pedagogical and management technologies, as a result of which the indicators (levels) of achievements of the structural components of education increase, the system transitions to a qualitatively different one" state, and its development depends on the extent to which the social and psychological environment needs a new idea" [3].

Readiness for innovation and directly the innovative activity of the teacher becomes a prerequisite for the effectiveness of the teacher, the maximum realization of his capabilities, the disclosure of scientific and creative potential, and this, in turn, becomes a guarantee of the formation of confident in his own strengths and abilities of student youth and a successful nation. Over time, pedagogical innovation significantly enriched educational practices with new ideas, new content, and modern technologies, which gave grounds to generalize these processes as an "innovative movement" in Ukrainian education.

Therefore, the innovative ideas of the New Ukrainian School in the educational practices of general secondary education institutions, the innovative environment, as a means of developing the innovative competence of teachers, acts as a means of supporting and organizing innovative activities of teachers.

For the change of traditional education to innovative one in Ukraine, the introduction of pedagogical innovation, there are all the prerequisites that are highlighted in the Concept of the New Ukrainian School, namely: social demand of progressive layers of society; conceptual, socio-philosophical elaboration of the new educational paradigm; a description of the methodology of educational activity as a tool for introducing theoretical postulates into the practice of education; the presence of great experience of innovative teachers; the development of a number of developmental learning technologies; the availability of experience of the countries of the European Union and the world of education restructuring. Thanks to the implementation of pedagogical innovation, the innovative potential of the teacher's competence grows and is realized, which occurs under the condition of an appropriate level of innovative educational environment and is determined by the presence of a creative social and psychological climate in the teaching staff of the educational institution, effective management systems and informational and methodological support for innovations.

An important innovation of the New Ukrainian School is the structuring of the content of the educational process on the basis of an integrative approach to education, the introduction of pedagogical innovation. According to Doctor of Pedagogical Sciences, trainer of the New Ukrainian School V. Sydorenko, a teacher of the new formation, who is at the forefront of social and educational transformations, is motivated, competent, and fulfills the role of mentor, coach, facilitator, and tutor in the educational process, has academic freedom, possesses anticipatory

project management skills (planning and organization of training, development of educational and methodological support, evaluation, etc.), independently and creatively acquires information, organizes a child-centered process, transforming methods, methods, and technologies of training depending on the requests and needs of customers of educational services, forming a vision on the modern world and place in it [7].

The modern learning environment is a dynamic, democratic environment that is constantly changing to take into account the interests of each child and their level of development. The central figure in the classroom is the child, and teachers should provide students with ample opportunities for choice, and research, encourage diligence and personal responsibility, promote effective communication, and develop mutual respect between children and adults, as the teacher plans the educational process in such a way that it ensures the individualization of learning. The equipment, educational materials, and organization of the class contribute to the development of each child, and the types of activities correspond to the interests and level of development of the children. Based on observations of children, the teacher adapts materials and types of activities, methodical innovations to take into account the different needs and interests of children, and the individualization of education allows children to develop in their own way.

Implementation of innovative activities in institutions of general secondary education provides ample opportunities for the professional growth of the teacher, helps to predict the results of training, and encourages the teacher to self-development. With the introduction of innovative educational practices in the educational process, it is important to identify requests with the introduction of innovations, psychological support of society for innovative activities; diagnosis of innovation effectiveness; adaptation of teachers (pedagogical, methodical, psychological); providing assistance to the administration in solving existing problems.

Conclusions. Without denying the innovations implemented in the educational institutions of Ukraine, certain positive changes in education through the introduction of the best world experience into educational practice, we must still, first of all, rely on our own national education system, since the traditional values of education, the principle of national orientation, national self-determination of society, emphasize the connection of education with national history, traditions, and their role in preserving and enriching the culture of the Ukrainian people, should be among the important tasks of reforming the educational system of Ukraine.

References

1. Busel V. T. (2005) *Velykyi tlumachnyi slovnyk suchasnoi ukrainskoi movy: 250000.* [A large explanatory dictionary of the modern Ukrainian language: 250,000.] Irpin, Kyiv Region, Ukraine: Perun. [in Ukrainian]

2. Dychkivska I.M. (2004) *Innovatsiini pedahohichni tekhnolohii: Navchalnyi posibnyk.* [Innovative pedagogical technologies: Study guide.] Kyiv, Ukraine: Akademvydav. [in Ukrainian]

3. Kremen V.H. (2021) *Entsyklopediia osvity.* [Encyclopedia of education.] Kyiv, Ukraine: Yurinkom Inter. [in Ukrainian]

4. Danilenko L. I., Palamarchuk V. F., Perevoznikova H. M. (2004) *Innovatsiini poshuky v suchasnii osviti.* [Innovative searches in modern education.] Kyiv, Ukraine: Lohos. [in Ukrainian]

5. Palamarchuk V. F. (2005) *Innovatsiini protsesy v pedahohitsi. Pershoosnovy pedahohichnoi innovatyky. T. 2.* [Innovative processes in pedagogy. Basic pedagogical innovations. Vol. 2.], pp. 59-60. T.2. Kyiv, Ukraine: Osvita Ukrainy. [in Ukrainian]

6. Pukhovska L. (2017) Profesiina osvita ta innovatsii: dosvid krain Yevropeiskoho Soiuzu. [Professional education and innovation: the experience of the countries of the European Union.] *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika, No. 14*, pp. 124-132. Retrieved from: http://nbuv.gov.ua/UJRN/Nvipto_2017_14_18 [in Ukrainian]

7. Sydorenko V.V. (2017) Nova ukrainska shkola: kontseptualni oriientyry. [New Ukrainian school: conceptual landmarks.] *Materialy metodolohichnoho seminaru z onlain-transliatsiieiu "Osvitno-filosofski zasady Novoi ukrainskoi shkoly", 18 zhovtnia 2017 roku.* Kyiv, Ukraine. Retrieved from: http://lib.iitta.gov.ua/708457/ [in Ukrainian]

8. Sydorenko V.V. (2018) Kontseptualni zasady Novoi ukrainskoi shkoly: kliuchovi kompetentnosti, tsinnisni oriientyry, osvitni rezultaty. [Conceptual foundations of the New Ukrainian School: key competencies, value orientations, educational results.] *Metodyst, No. 5*, pp. 4-21. [in Ukrainian]

IMPLEMENTATION OF THE COMPETENCY APPROACH IN PHYSICS LESSONS IN TODAY'S MEASURE

Oksana Vernydub

Sector Head,

Department of Work with Gifted Youth,

Scientific Institute of

Education Content Modernization,

Kyiv, Ukraine

Abstract

The problem of introducing the competence approach into the educational process of institutions of general secondary education has been studied. An analysis of the concepts of "competence" and "competence" was carried out on the basis of scientific literature.

It is noted that the competency-based approach puts first not the student's awareness, but the ability to solve problems arising in specific situations with the help of acquired knowledge and acquired skills, because each subject has great potential for the development of children's key competencies. You just need to try to see new ways of working, to go beyond the traditional boundaries of subject perception, to use integration and interactive technologies more often.

It was determined that competence is a universal combination of abilities, knowledge, skills, ways of thinking, value orientations, and ideological beliefs that allow you to confidently and successfully get out of non-standard life situations, and make it possible to achieve success in education.

Keywords: competence, key competence, competence approach, education.

Formulation of the problem. The modern world requires us the ability to respond efficiently and quickly to the challenges that are increasing every day. In such conditions, school education should become the bridge that helps children to be competitive and self-sufficient. The peculiarities of the reform of modern education in Ukraine are determined, first of all, by the

peculiarities of informational achievements, globalization, transformational processes in society, the world, and the ability to adequately respond to external changes that are taking place.

For the second year in a row, the Ukrainian state lives in the difficult conditions of war, so the needs of society encourage teachers and pedagogues-scientists to search for new pedagogical ideas, technologies, methods, and approaches to teaching subjects in general secondary education institutions, to spread and implement innovative pedagogical experience. At the same time, it is worth realizing that education as a social institution, developing and self-improving, changes its structure and content in accordance with the conditions prevailing in the state.

In the context of reforming Ukrainian education, bringing it closer to European standards, the introduction of a competency-based approach to the national education system, the clarification of its essence and features, and this, in turn, leads to interest in this issue and its comprehensive study.

The Law of Ukraine “On Education” (2017), developed on the basis of the Concept of the New Ukrainian School, declared a course for the implementation of the competence approach in education. Article 12 states that “the goal of comprehensive general secondary education is comprehensive development, upbringing, and socialization of an individual who is capable of life in society and civilized interaction with nature, has a desire for self-improvement and lifelong learning, is ready for conscious life choices and self-realization, responsibility, labor activity, and public activity”. Achieving this goal is ensured by the formation of key competencies needed by every modern child for successful life activities, which are provided for by the Concept of the New Ukrainian School, adopted by the decision of the board of the Ministry of Education and Culture of Ukraine dated October 19, 2016 [8].

The value of problem-based learning is that it makes explanation more evident and knowledge more conscious; teaches students to think dialectically, introduces them to methods of cognition, enhances the emotionality of the presentation, and therefore increases students’ interest in studying the subject. It stimulates students’ thinking, their cognitive activity, promotes the motivation of student's cognitive activity, and gives the work a creative character.

Competence training is a combination of knowledge, skills, and values and only in a complex it gives results. Knowledge in this case is not an end in itself, but rather a means of forming skills, because it is not enough to simply learn certain knowledge and skills, it is important to

learn to apply them in typical and non-standard, new situations for the child, which allows to form a valuable attitude towards this knowledge, teaches to adapt and find ways decision-making in various situations.

The purpose of the study is to highlight the ways of implementing the competence approach in physics lessons in general secondary education institutions.

Materials and methods. To investigate the essence of the competence approach, a number of general scientific and special methods of scientific knowledge were applied, in particular, analysis and synthesis, problem-chronological, systemic-structural and comparative, legislative, educational-methodical, and professional literature, reference publications were developed. Among the methods of scientific research, analysis, synthesis, observation, conversation, and generalization were used.

Analysis of recent research and publications. Many scientific works are devoted to the problem of the competence approach in education, the essence of the concepts “competence” and “competence”. Western European researchers were among the first to address the issue of the competence approach in education, but their works are mainly devoted to the description of the structure of competencies and competence.

Many domestic and foreign scientists I. Beh, N. Bibik, L. Vashchenko, M. Golovan, B. Grudynin, I. Yermakov, V. Kremen, and S. Leyko paid attention to the problem of implementing the competence approach, which has become urgent in education. O. Lokshina, V. Lugovii, O. Ovcharuk, L. Parashchenko, O. Pometun, O. Savchenko, P. Saukh, E. Symanyuk, S. Trubachova, L. Fedorova, R. Badera, D. Martens, B. Oscarson, A. Shelten and others.

Among modern Ukrainian publications, the collective monograph of L. Antoniuk, N. Vasylkova, D. Ilnytskyi, I. Kulaga, and V. Turchaninova should be noted, dedicated to the world experience of implementing the competence approach in education, and identified and analyzed the problems and shortcomings of its application.

According to some scientists, the reasons for the increased interest in the concepts of “competence”, “competence”, and “competence approach” are due to the need to develop a new concept of education that would reflect changes aimed at reproducing such personality properties as mobility, dynamism, constructiveness, professionalism; searching for new approaches to

defining goals, developing content, and organizing education; the need to modernize general and professional education in order to meet the demands of society and the needs of the individual.

According to the definition of A. Bermus, the competence approach is related to the idea of goal-directedness and goal-setting of the learning process, according to which competencies set a higher, general level of abilities and skills, and the content of education is determined by a four-component model (knowledge, skills, experience of creative activity and experience of value attitude).

The essence of the competence approach lies in the focus of the educational process on the formation and development of key (basic) and subject competencies [3].

The competence approach does not prioritize the student's awareness, but the ability to solve problems that arise in specific situations with the help of acquired knowledge and acquired skills. The development of thinking is an important, but not the only task of education, therefore it is necessary to choose methods that develop the emotional, moral, and spiritual spheres of the child because the formation of competencies in students does not negate the need for knowledge.

Today presents society with new tasks - to form the student's ability to learn, therefore the education of such a socially active personality requires the teacher to use new methods, techniques, and forms of work. Teaching a new topic in competency-based learning is based on problem-based and activity-based approaches, so one of the main levers of implementing competency-based learning is the teacher's ability to conduct a problem-based dialogue, organize student interaction, and conduct formative assessment. Undoubtedly, the teacher's arsenal is greatly enriched by electronic resources, materials for conducting experiments, visual collections, models, etc.

Each subject has great potential for the development of children's key competencies. You just need to try to see new ways of working, go beyond the traditional boundaries of subject perception, and more often involve integration and interactive technologies in the educational process. For example, in mathematics lessons, it is possible to form not only mathematical, information-digital, and entrepreneurial competence. Studying this subject ensures that the child acquires most of the key competencies through the introduction of interactivity and interaction with other fields of knowledge.

Physics is one of the most important school subjects, especially now, when high technology is taking over the world. That is why students must be ready to apply the acquired knowledge and developed skills in practice, solve non-standard life situations, and be ready for continuous learning throughout life. In addition, this subject provides a huge space for creativity and the development of children's creative abilities, which contributes to the motivation of students for scientific research and the creation of inventive projects.

In the classical approach to teaching, the lesson scenario unfolds approximately according to the following scenario: the teacher informs the topic, explains what it is for in life, and tells and illustrates the topic. The lesson begins with a problem question or problem situation. Students have to express their own hypotheses. In such lessons, students develop a key competence - a specially structured set of personality characteristics (qualities), which enables them to act effectively in various spheres of life and belongs to the general content of educational standards.

A competent approach in physics lessons involves the ability of students to: see and apply knowledge of physics in real life; build and explore a physical model; interpret the obtained results during the lesson or project; conduct experiments and experiments with physical phenomena and processes; solve theoretical and applied problems related to real-life situations [5].

It is the reliance on the interrelationships of knowledge that helps to understand their essence and regularity in the learning process. A competent approach is a response to the requirements of the time, it is a reference point for the national education system. Without the ability to establish organic connections between physical concepts, knowledge will be formal, as it will not be able to be activated in practice.

Physics lessons are effectively conducted using pedagogical software tools, ready-made computer models (process research), and computer modeling of processes studied by physics.

The implementation of the competence approach creates conditions for the formation of internal motivation for learning. At the same time, the factors that positively affect the formation of motivation are: the practical orientation of the goal of the lesson as personally significant, and important for everyone; use in the learning process of students' existing life experience, their everyday observations, and experience of practical activities; the connection of educational material with the everyday life of a person, phenomena that occur in the environment; the use of

learning outcomes in practical human activity [4].

The organization of teaching in physics will be facilitated by the use of a practice-proven lecture-seminar system, and not from time to time, but rather regularly, group work, problem-based learning, didactic games, drawing up educational schemes and reference notes, etc. For this purpose, it is advisable to activate interactive methods in the teaching methodology and the construction of lessons, in particular the method of projects, information technologies, conducting workshops based on statistical materials, as well as seminars, conferences, business games aimed at the development of the analytical and synthetic activity of students. In lessons, students should be taught to use induction, deduction, analysis, synthesis, draw conclusions and generalize.

An important means of learning can be control of questions and test tasks, which are not aimed at reproducing meanings, facts, or formulas, but at clarifying the elements and structure of meanings of objects; their places in the system of other concepts; operations that can be performed with the object; its features and properties; individual exceptions and subtleties. Such control questions stimulate the productive thinking of students, contribute to the informal assimilation of theoretical material, and form the skills of comparison, classification, generalization, and application of natural concepts and objects.

Ways of implementing competencies in physics lessons in general secondary education institutions can be: conducting an experiment (interest in the “way of surprise”); solving problems with professional content; the subject’s connection with the child’s life; use of interactive methods and non-traditional lessons; the use of ICT and the project method, which involves students mastering the ability to independently acquire and use information.

For example, when studying the topic of light phenomena, it is worth applying project methods of work, offering students to develop several projects about the history of the creation of lenses and the possibilities of their use in various spheres of human life. During the search activity, the child develops the following competencies: the ability to learn (organization and planning of work to achieve a positive result; development of the ability to perceive and apply different methods of learning and design; improvement of the ability to find and correctly use information; the ability to evaluate one's own strengths and the results of one’s work); general cultural (understanding the benefits and necessity of a tolerant and respectful attitude towards

others; ability to use and argue theoretical knowledge; development of innovative thinking); social and civic (improvement of communication and teamwork skills; development of initiative, ability to take responsibility and organize teamwork; experience in resolving conflict situations and finding understanding); entrepreneurial competence (development of the ability to plan and organize one's own project activities and teamwork; development of skills for successful cooperation with the audience) [5].

In the future, the teacher offers the children to test them in practice. In the process of research, the correct hypothesis is chosen with the search for answers regarding options for solving the problematic issue.

Conclusions. So, the dynamic development of modern civilization with rapid changes in technology and technology, rapid accumulation of information, leads to the formation of such a society that needs constant renewal. This requires modern education to train a person capable of acting in a rapidly changing situation, trained to critically compare information from different sources and realize oneself in a multicultural environment. Competence is a universal combination of abilities, knowledge, skills, ways of thinking, value orientations, and ideological beliefs, which allow you to confidently and successfully get out of non-standard life situations, making it possible to achieve success in education.

The implementation of the competence approach in the study of physics will contribute to the improvement of the quality of education and the intellectual and cultural development of the individual, the formation of his ability to quickly respond to the demands of the time. Competence is currently becoming a new measure of human education when the first place is given not to the learning process and the amount of material learned, but to the final result embodied in the ability to act in different conditions and circumstances.

References

1. Antoniuk L. L., Vasylkova N. V., Ilnytskyi D. O. (2016) *Kompetentnisnyi pidkhid u vyshchii osviti: svitovyi dosvid.* [Competency approach in higher education: global experience.] Kyiv, Ukraine: KNEU. [in Ukrainian]

2. Bekh I. (2012). Kompetentnisnyi pidkhid yak osvitnia stratehiia. [Competency approach as an educational strategy.] *Kompetentnisnyi vymir osobystisnoho zrostannia uchnivskoi molodi: teoriia, praktyka, dosvid: materialy Vseukrainskoi naukovo-praktychnoi konferentsii, 10–11 kvitnia 2012 r.* Retrieved from: https://lib.iitta.gov.ua/8772/1/534%20Bekh.pdf [in Ukrainian]

3. Busel V. T. *Velykyi tlumachnyi slovnyk suchasnoi ukrainskoi movy: 250000.* [A large explanatory dictionary of the modern Ukrainian language: 250,000.] Irpin, Kyiv Region, Ukraine: Perun. [in Ukrainian]

4. Hrudynin B. O. (2015) Kompetentnisnyi pidkhid: sutnist vyskhidnykh poniat ta polozhen. [Competency approach: the essence of ascending concepts and provisions.] *Nauk. Zapysky, Series: Problemy metodyky fizyko-matematychnoi i tekhnolohichnoi osvity, Vol. 2, No. 7*, pp.140–146. [in Ukrainian]

5. Holovan M.S. (2011) Kompetentsiia ta kompetentnist: porivnialnyi analiz poniat. [Competence and competence: a comparative analysis of concepts.] *Pedahohichni nauky: teoriia, istoriia, innovatsiini tekhnolohii, No. 8*, pp. 224–233. [in Ukrainian]

6. Kremen V. (2013). Innovatsiina liudyna yak meta suchasnoi osvity. [An innovative person as the goal of modern education.] *Filosofiia osvity, No. 1(12)*, pp. 7–22. [in Ukrainian]

7. (2016) Nova ukrainska shkola. [New Ukrainian school.] *Ministerstvo osvity i nauky Ukrainy: ofitsiinyi vebsait.* Retrieved from: https://mon.gov.ua/ua/tag/nova-ukrainska-shkola [in Ukrainian]

8. (2017) Pro osvitu: Zakon Ukrainy vid 5 veresnia 2017 r. № 2145-VIII (stanom na 8 serpnia 2021 r.) [On education: Law of Ukraine of September 5, 2017 No. 2145-VIII (as of September 8, 2021)] *Verkhovna Rada Ukrainy.* Retrieved from: https://zakon.rada.gov.ua/laws/show/2145-19#Text (data zvernennia: 01.11.2022). [in Ukrainian]

9. Raven Dzh. (2002) Kompetentnost v sovremennom obshchestve: viavlenye, razvytye y realyzatsyia. [Competence in modern society: identification, development and implementation.] Moscow, Russia: Kohyto-Tsentr. [in Russian]

10. Esfandiari M., Sepora T., Mahadi T. (2015). Translation competence: Aging towards modern views. *Procedia-Social and Behavioral Sciences, No. 192*, pp. 44–53.

11. Salman M., Ganie S., Saleem I. (2020). The concept of competence: a thematic review and discussion. *European Journal of Training and Development*, *Vol. 44*, pp. 717–742.

Editorial Office

Global Academics, International Journal of Advance Researches

3401 Townsend Blvd. Suite 204. Jacksonville, FL 32277

United States of America.

Email: editor.globalacademics@gmail.com

Phone: +1-904-428-3807

+1-904-428-6275

Website: *www.i-journal.org*

ISSN: 2641-9823