<u>РОЗВИТОК РЕГІОНІВ, ГАЛУЗЕЙ ТА ВИДІВ ЕКОНОМІЧНОЇ</u> ДІЯЛЬНОСТІ

DEVELOPMENT OF REGIONS, INDUSTRIES AND TYPES OF ECONOMIC ACTIVITY

UDC: 374.7:331.101.2

DOI: https://doi.org/10.31651/2076-5843-2021-1-49-56

ONOPRIIENKO Kateryna DURANOWSKI Wojciech

PhD student, PhD (in Economics),
Sumy State University, Opole University,
Sumy, Ukraine Opole, Poland

ORCID ID: https://orcid.org/0000-0002-3984-6332 ORCID ID: https://orcid.org/0000-0002-3984-6332

k.onoprienko@uabs.sumdu.edu.ua wduranowski@gmail.com

PETRUSHENKO Yuriy ARTYUKHOV Artem

Doctor of Economics, Professor, PhD (in Technical Sciences)
Sumy State University, Sumy State University,

Sumy, Ukraine Sumy, Ukraine

ORCID ID: https://orcid.org/0000-0003-1112-6891

y.petrushenko@uabs.sumdu.edu.ua a.artyukhov@pohnp.sumdu.edu.ua

DIGITALIZATION OF ADULT EDUCATION IN THE CONTEXT OF HUMAN CAPITAL DEVELOPMENT

Modern society has entered a new century in the process of increasing global change, among which human changes and their development sharply lag behind the changes in the techno-economic sphere. Global processes require overcoming this gap and creating a modern adult education system that shapes and develops human beings and, as a consequence, increases human capital.

The article describes digital adult education as a factor in improving national human capital, its direct impact on human development as a whole, and as an employee. It also shows Ukraine's place in the human capital index of countries, which includes education as one of the rating points. With the changing nature of work, some workers find themselves in a situation where their skills are lacking. Against the backdrop of transformations aimed at shaping and improving human capital, people of working age are experiencing increasing concern about job prospects and their social role. In the course of work, a number of benefits of lifelong learning have been identified and grouped into such categories as: increasing well-being, contributing to human capital through continuing vocational training and enriching one's life and realizing oneself as a person. Ukraine needs a radical change in the paradigm of its socio-economic progress, the transition to new forms of education, namely, more attention to adult education. It is the basis of a high quality of life and national human capital.

Key words: digital adult education, socio-economic development, human capital.

Introduction. Digital adult education is a pressing issue in society as it is directly linked to the level of human capital. At present, this indicator is especially important and the education of an adult is one of the main factors for its growth. Therefore, adults have a continuing need for continuing education. Nowadays, the topic is becoming more relevant as the world has begun to focus not only on production but also on its quality, and adult education and the level of human capital are a top priority. Therefore, there is a need to explore adult education as a factor in influencing human capital. Lifelong learning is seen as a strategy for creating lifelong learning opportunities and is described as a factor influencing human capital. In developed countries, human capital has become a turning point in economic development, as well as in the tendencies towards the social sectors that support this development, especially adult education.

Literature review. Subjects of adult education are devoted to the publication of such domestic scientists as Grishnova O. [3], Markozova O. [13], Rykovska O. [19]. In particular Grishnova O. examines issues of education as a factor of economic growth of Ukraine.

Markozova O. analyzes the essence of the concept of lifelong learning and proves that the main resource for self-realization of the individual in the information society is educational capital. Rykovska O. summarizes the European experience of formalizing adult education, emphasizes the economic and social feasibility of adult education as an important factor in the development of human capital and its quality improvement. Also, the subject of lifelong learning in the context of human capital is addressed by the following foreign authors: Hendricks L. [4], Kim Jim [6], Muscle D. [14] and other. Hendricks L. and Muscle D. highlight the benefits of adult education for economic growth and raising human capital [8, 15]. Kim Jin, for his part, argues for the need for human development and lifelong learning [5].

In the past few years, studies have appeared that are devoted to the current aspects of digitalization of education and the development of human capital, in particular in the context of the development of modern information technologies and the impact of the COVID-19 pandemic [1, 9, 10, 11, 12, 16, 18, 20, 21, 22, 24, 25, 26]. However, the issue of adult education as a factor affecting human capital is undervalued and needs further study and justification.

The purpose of the article is to identify and substantiate digital adult education as a factor influencing human capital improvements.

Results and discussion. Knowledge-based economies, new technologies, the increasing pace of technological change, and globalization all affect the needs for improving the skills and competences of the population. Lifelong learning covers the whole range of training, including formal, non-formal and informal learning. It also includes the skills, knowledge, attitudes, and behaviors that people acquire in their daily experiences. Lifelong learning is the continuous formation of skills and knowledge throughout a person's life. Not only does this increase social inclusion, active citizenship and personal development, but also competitiveness and efficiency. Lifelong learning helps people achieve other goals, such as taking an active part in civic life, leading a more sustainable lifestyle, and improving their health and well-being. It also benefits society by reducing unemployment and encouraging community action [3].

Adult education is part of the lifelong learning system, its relatively separate unit, whose mission is to promote the full development of the adult. Adult education is a direction that addresses the educational needs of those engaged in professional activities [4].

The globalization and growth of the rapidly changing knowledge economy mean that people need to improve their skills throughout adulthood in order to cope with modern technologies, both in their work and in their private lives. Nowadays, an increasingly important basic skill in the ever-changing technological universe has been the ability to learn new skills and adapt to the fact that life will have to be learned if one is to be sought after professionally and as a member of society.

At the present stage of socio-economic development, the strategic goal of the state is the formation of an innovative economy and raising the level of human capital, which requires another type of worker with a high level of social, cultural and professional education. As the experience of European countries shows, the sustainable development of the economic system becomes possible with the achievement of a certain "critical mass" of workers (up to 35%) that will meet the needs of production [19].

Dogotal lifelong learning is an ongoing process that stimulates and empowers people to acquire all the knowledge, values and skills they need throughout their lives, and apply them with confidence, creativity and enjoyment in all roles, circumstances and environments. We live in a world where people have to interpret and process different information, be computer and financially competent. Consequently, it is difficult to underestimate the importance of adult education in terms of economics. In the course of the work, the benefits of lifelong learning were identified as a factor influencing the economic development of the country (Fig 1).

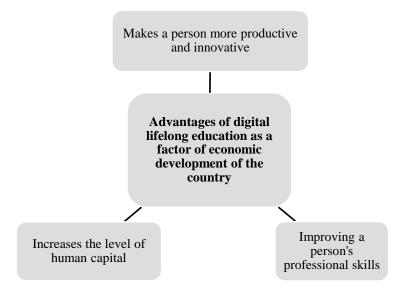


Fig 1. Benefits of digital lifelong learning for the country's economic development *Source:* summarized by the authors on based [6, 15, 17].

Employees create and discover new abilities and ideas. In our knowledge-based economy and society, change is constant in the workplace. Therefore, people who are constantly learning new and challenging themselves can better cope with the needs and changes of the workplace.

Lifelong learning provides people with knowledge, the skills, values, attitudes, and understandings they will need in both everyday and professional life. The more knowledge and skills people develop, the greater the level of human capital and overall potential in the economy. A stronger economy means that citizens are better off earning more, living better and promoting the economic system [3].

It can be argued that the benefits of lifelong learning include a number of points, which include raising human capital.

As part of a study using Voswiever software, we found the frequency of use of the words "human capital" and "e-learning". Thus we see that these two concepts are closely related and unite around themselves many other social sciences (Fig 2).

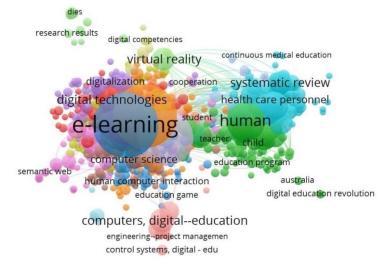


Fig 2: Frequency of key words implantation in scientific articles by subject of digital education and human capital

Source: WoS&Scopus Database using Vosviewer software.

Hildebrand D. S. noted the benefits of adult education in the context of improving human capital (Fig 3).

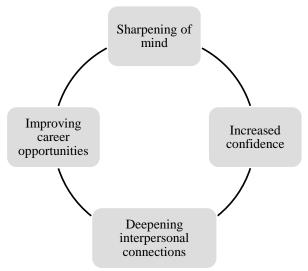


Fig 3. Advantages of adult education in the context of improving human capital by Hildebrand D. S.

Source: summarized by the authors on based [5].

As you grow older, lifelong learning helps to keep your mind clear and improve memory. It is a known fact that learning generally has a beneficial effect on the brain. Studies have shown that people with higher education are less likely to have memory problems in old age, and thus longer can perform their professional responsibilities. When a person does not go out of his way for a while, a world where every day invents something new can be a serious challenge for the person, and education has the effect of increasing the person's confidence. In the process of lifelong learning, this fear is easier to overcome because one will adapt.

Being able to communicate can help greatly improve our interpersonal connections in the age of gadgets and social networks when it is awkward to have a conversation with a stranger on the street, share information live, present a project, etc. [7].

For anyone who is looking to move their careers to the next level, or whatever it may sound like, to hold on to the same position, lifelong learning will be a necessary point to pursue. That is, in the process of education an adult enhances his career opportunities. Therefore, human capital must not deteriorate as a matter of priority and, with proper and continuing education, be improved [13].

For anyone who is looking to move their careers to the next level, or whatever it may sound like, to hold on to the same position, lifelong learning will be a necessary point to pursue. That is, in the process of education an adult enhances his career opportunities. Therefore, human capital must not deteriorate as a matter of priority and, with proper and continuing education, be improved [13].

A learning society is a vision of a society that recognizes the opportunities to educate everyone, wherever they may be, and whatever their age. The pace of technological change in the knowledge economy is increasing, which means that we need a flexible and adaptable workforce that is ready to retrain and retrain to keep up with economic, technical and linguistic needs.

Mascle D. lists the benefits of adult education which are as follows. First, it is the prospect of a higher salary. "Action" is for smart people who keep up with the latest information and technology. It is simply a vital incentive to freshen up and retrain yourself in the workplace (Fig 4).

Secondly, it is heightened self-esteem when meeting new goals, taking on tough challenges and taking it to a whole new level.

The third is the freedom given to adult learners. Adults share ideas and teach each other. In the learning process, tasks can be completed by a group project or program.

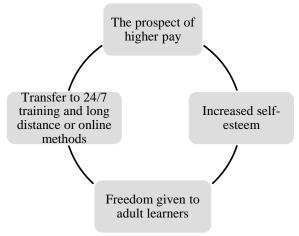


Fig 4. Advantages of Adult Education by Mascle D.

Source: summarized by the authors on based [14].

Fourth is the transition to 24/7 model training and long distance or online methods. Computer training allows you to stay home and study without paying for travel and food from a student and rent from a service provider. It is also a time saver [15].

One of the socio-economic indicators that includes the education level of the population is the human capital index. According to the World Bank, in 2019, Ukraine ranked 50th with 157th in terms of quality of human capital. The score varies from 0 to 1. Ukraine scored 0.68 points. We had countries like Bahrain, United Arab Emirates, China. Singapore's leader has a score of 0.88, Chad has the lowest score of 0.26 (Fig 5).

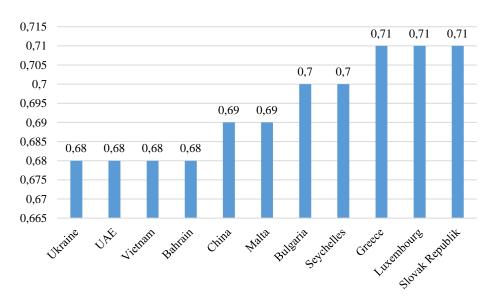


Fig. 5. Rating of Ukraine by the Human Capital Index 2020

Source: summarized by the authors on based [19].

In 2019, Ukraine is among the top 6 countries to take part in the World Bank Pilot Project on the Human Capital Index. Therefore, it can be argued that participation in the project will provide an incentive to improve the indicator.

Undoubtedly, adult education has a number of benefits for both the individual and the economy of the country. A lifelong learner will go in with the community, staying abreast of changes in areas such as technology, political, economic, professional trends, or issues of finance, money, and culture. Lifelong learners will look for opportunities to introduce new technologies and thus change their approach to work, cultural and financial enrichment, and education as a whole.

New jobs and jobs are constantly being created. A new career is opening all the time. An ablebodied applicant or employee is one who has not only certificates, diplomas, but also knowledge and, accordingly, a high level of human capital. A lifelong learner is an engine of economic development, staying on top of his or her industry to be able to respond to change quickly and without fear. Therefore, adult education is increasingly becoming the vector that needs to move the economy into the 21st century.

Conclusions. Therefore, a huge advantage of digital adult education is its impact on enriching life and raising human capital. Each person has topics that they are interested in. And the labor market trends are such that the employer wants to hire someone who is not only competent in the business but also loves what he will do. As a physical performer, human beings are no longer interesting, as technologies are gradually replacing and fulfilling the simplest of tasks, and so the need for adult education in the context of improving human capital is gaining ground.

Digital adult education is first and foremost a factor affecting human capital. Therefore, it should be noted that the economic development of the 21st century is gradually beginning to be characterized not only by economic but also by social indicators, namely the index of human capital. And for the full economic development of the country, not only human income but also the standard of living as a whole must be taken into account.

Consequently, the reorientation of the economy to human development should become the most important characteristic of Ukraine's future socio-economic progress.

Acknowledgment. The article was published as part of a research projects "Convergence of economic and educational transformations in the digital society: modeling the impact on regional and national security" (No. 0121U109553) and "Reforming the lifelong learning system in Ukraine for the prevention of the labor emigration: a coopetition model of institutional partnership" (No. 0120U102001).

References

- 1. Cosmulese, C.G., Grosu, V, Hlaciuc, E., Zhavoronok, A. (2019). The Influences of the Digital Revolution on the Educational System of the EU Countries. *Marketing and Management of Innovations*, 3, pp. 242-254.
 - 2. Dave R. N. (1976). Lifelong Education Foundation: Some Methodological Aspects, Hamburg, 344 p.
- 3. Grishnova O.A. (2012). Effectiveness of education as a factor of motivation of investment in human capital/O.A. Grishnova// *Regional prospects*, №3-4 (22-23), P.69–72.
- 4. Hendricks L., Schoellman T. (2017). Human Capital and Development Accounting: New Evidence from Wage Gains at Migration. *Quarterly Journal of Economics*, 133 (2), P.665–700.
- 5. Hildebrand D. S. (2011). The powerful benefits of lifelong learning. Retrieved from: http://www.officearrow.com/training/the-powerful-benefits-of-lifelong-learning-oaiur-861/view.html (Accessed: 20.11.2020).
- 6. Kim Jim Yong. (2018). The Human Capital Gap: Getting Governments to Invest in People. *Foreign Affairs*, 192 p.
- 7. La Torre G., De Leonardis V., & Chiappetta M. (2020). Technostress: How does it affect the productivity and life of an individual? results of an observational study. *Public Health*, P. 60–65.
- 8. Leonidova G.V., Ustinova K.A. (2012). Continuing education as a condition for the formation of human capital. *Economic and social changes: facts, trends, forecast*, 6 (24), P.55–62.
- 9. Kibaroğlu, O. (2020). Self Sovereign Digital Identity on the Blockchain: A Discourse Analysis. *Financial Markets, Institutions and Risks*, 4(2), 65-79. https://doi.org/10.21272/fmir.4(2).65-79.2020.
- 10. Kolomiiets, U., Petrushenko, Yu. (2017). The human capital theory. Encouragement and criticism. *SocioEconomic Challenges*, *I*(1), 77-80. http://doi.org/10.21272/sec.2017.1-09.
- 11. Lopez, B.S., Alcaide, A.V. (2020). Blockchain, AI and IoT to Improve Governance, Financial Management and Control of Crisis: Case Study COVID-19. *SocioEconomic Challenges*, 4(2), 78-89. https://doi.org/10.21272/sec.4(2).78-89.2020.
- 12. Mamun, M. Z. A., Khan, M. Y. H. (2020). A Theoretical Study On Factors Influencing Employees Performance, Rewards And Motivation Within Organisation. *SocioEconomic Challenges*, 4(3), 113-124. https://doi.org/10.21272/sec.4(3).113-124.2020.
- 13. Markozova O.O. (2013). Learning for Life A Prerequisite for Achieving Life Success. *Vis. international. Slavs. un-tu. Kharkiv. Series "Sociological Sciences"*, Vol. 16, No. 1, P. 5–13.

- 14. Mascle D. (2017). No Adult Left Behind: The Big Benefits of Lifelong Learning. Article Alley. UK. Retrieved from: http://deannamascle.articlealley.com/no-adult-left-behind-big-benefits-of-lifelong-learning-139607.html (Accessed: 10.01.2021).
- 15. Marjan L., Peyman S. (2012). Peyman S. Lifelong learning; why do we need it? *Procedia Social and Behavioral Sciences*, 31, P. 399–403.
- 16. Nazneen, A., Alsulimani, T., & Sharma, R. (2020). Marketing and Management in Higher Education: the Relationship between the Quality of Online Programmes and Student's Satisfaction. *Marketing and Management of Innovations*, 2, pp. 235-246.
- 17. Nordstrom N. M., Merz J. F. (2016). Learning later, living greater; the secret for making the most of your after years. Colorado. USA. Sentient Boulder Publishing, 204 p.
- 18. Probst, D.T., Kasztelnik, K. (2020). The Observational Research Study with the Trends in Healthcare Training and Leadership Ethics in The United States. *Business Ethics and Leadership*, 4(3), 6-24. https://doi.org/10.21272/bel.4(3).6-24.2020.
- 19. Rykovska O.V. (2016). Adult education as a factor in human capital development: European experience and Ukrainian trends. *Economic Sciences*, № 22. P. 96–101.
- 20. Vorontsova, A. S., Lieonov, S. V., Vasylieva, T. A., & Artiukhov, A. Y. (2018). Innovations in the financing of lifelong learning system: expenditure optimization model. *Marketing and Management of Innovations*, 2, pp. 218-231.
- 21. Shkarlet, S., Kholiavko, N., Dubyna, M., & Zhuk, O. (2019). Innovation, Education, Research Components of the Evaluation of Information Economy Development (as Exemplified by Eastern Partnership Countries). *Marketing and Management of Innovations*, 1, 70-83.
- 22. Skrynnyk, O. (2020). Surrogate Leadership Model for Digital Organizational Systems. *Business Ethics and Leadership*, *4*(4), 140-146. https://doi.org/10.21272/bel.4(4).140-146.2020.
 - 23. World Development Report: The Changing Nature of Work. Washington. (2019), 255 p.
- 24. Yarovenko, H., Kuzmenko, O., Stumpo, M. (2020). DEA-Analysis Of The Effectiveness Of The Country's Information Security System. *SocioEconomic Challenges*, 4(3), 142-153. https://doi.org/10.21272/sec.4(3).142-153.2020.
- 25. Zainea, L.N., Toma, S.G., Marinescu, P., Chiţimiea, A. (2020). Combating Unemployment through Social Entrepreneurship in the European Context. *Business Ethics and Leadership*, 4(4), 85-98. https://doi.org/10.21272/bel.4(4).85-98.2020.
- 26. Zwerenz, D. (2020). Performance Incentives To Increase Motivation; Potentials Of Meaningful Activities In Project Management. *SocioEconomic Challenges*, 4(4), 95-118. https://doi.org/10.21272/sec.4(4).95-118.2020.

ОНОПРІЄНКО Катерина Володимирівна

аспірантка,

Сумський державний університет, м. Суми, Україна

ПЕТРУШЕНКО Юрій Миколайович

доктор економічних наук, професор, Сумський державний університет, м.Суми, Україна

ДУРАНОВСЬКИЙ Войцех

доктор філософії, Опольський університет, м. Ополє, Польща

АРТЮХОВ Артем Євгенович

кандидат технічних наук, Сумський державний університет, м. Суми, Україна

ДІДЖИТАЛІЗАЦІЯ ОСВІТИ ДОРОСЛИХ В КОНТЕКСТІ РОЗВИТКУ ЛЮДСЬКОГО КАПІТАЛУ

Проблема. Сучасне суспільство вступило в нове століття на фоні наростання глобальних змін, серед яких розвиток людського капіталу відстає від змін у техніко-економічній сфері. Глобальні процеси, що трансформуються такими катаклізмами, як пандемія COVID-19, вимагають подолання цього розриву та створення сучасної системи освіти впродовж життя, зокрема цифровізації освіти, яка формує та розвиває людський капітал.

Метою статті ϵ виявлення та обтрунтування особливостей цифровізації процесів освіти дорослих як фактора, що вплива ϵ на розвиток людського капіталу.

Результати. У статті описано цифрову освіту дорослих як фактор підвищення -людського капіталу в національному вимірі, її безпосередній вплив на розвиток людини в цілому та як працівника. Також показано місце України за індексом людського капіталу, який включає освіту впродовж життя як один із рейтингових балів. Зі зміною характеру трудових відносин працівники опиняються в ситуації, коли їхніх навичок бракує для подальшого економічного розвитку. На тлі трансформацій, спрямованих на формування та вдосконалення людського капіталу люди працездатного віку відчувають все більшу стурбованість перспективами роботи та їх соціальною роллю. В процесі роботи було визначено ряд переваг цифровізації освіти впродовж життя та згруповано за такими категоріями, як: підвищення добробуту, внесок у людський капітал через продовження професійного навчання, усвідомлення себе як особистості. На основі бібліометричного аналізу було виявлено частоту вживання у наукових працях таких понять як «цифровізація» та «людський капітал». Наведені аргументи на користь того, чому Україні потрібна докорінна зміна парадигми соціально-економічного прогресу, перехід до нових форм навчання, а саме - більша увага до цифровізації освіти впродовж життя з акцентом на освіті дорослих.

Наукова новизна. Цифровізація освіти дорослих розглядається як стратегія створення можливостей навчання впродовж життя і описується як фактор, що впливає на людський капітал. Обгрунтовано, що інвестиції в людський капітал є ключовим драйвером економічному розвитку в сучасних умовах науково-технічного прогресу та посилення впливу інформаційних технологій.

Висновки. Важливою перевагою цифровізації освіти дорослих є її вплив на всебічне залучення людського капіталу до складу продуктивних сил. Молодше покоління, що вже народилося в епоху інтернету і цифрових технологій більше пристосоване до вимог сучасниго бізнесу, тому нагальною і більш важливою з точки зору підвищення економічної ефективності є задоволення потреби в цифровізації саме освіти дорослих. Економічний розвиток в 21 столітті поступово починає характеризуватися не лише економічними, а й соціальними показниками, зокрема індексом розвитку людського капіталу. Для повноцінного економічного розвитку країни потрібно враховувати не лише доходи людини, але й рівень життя в цілому. Переорієнтація економіки на розвиток людини стає найважливішою характеристикою майбутнього соціально-економічного прогресу. Розвиток цифрової освіти та цифрової грамотності людини не залежно від її віку є нагальним питанням для вирішення, це той ресурс, що може забезпечити конкурентні переваги розвитку національної економіки в умовах сучасних глобальних змін.

Ключові слова: цифрова освіта дорослих, соціально-економічний розвиток, людський капітал.

Одержано редакцією: 04.12.2020 Прийнято до публікації: 05.02.2020