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EFFECTIVENESS OF OPEN EDUCATION IN THE LIFELONG LEARNING SYSTEM

Abstract. Today, open education plays an important role in the lifelong education system. It is open education that gives adults the opportunity to study in the time available to them and receive formal and informal education. Open adult education is not only a tool for personal

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development, but also an important element of social progress, democracy and building a society, as well as a transforming economy. Ensuring access to quality adult education is essential for achieving sustainable economic development of the country and ensuring a decent quality of life for all citizens.

Open education creates opportunities for adults to learn throughout their lives, which helps them change careers, increase their qualifications and keep up-to-date in today's world. Countries with a high level of education of the population have advantages in high-tech industries, which helps to stimulate economic development and attract investment. Skills acquired through open education help adults find better jobs or increase their competitiveness in the labor market. Ensuring access to education for all sections of society helps reduce social disparities and ensure equal opportunities for all.

As an innovative phenomenon, open education promotes the development of critical thinking and analytical skills, which allows adults to be more informed citizens and make informed choices. The opportunity to learn and develop helps adults realize their potential, find exciting new interests and achieve personal growth. Acquiring new knowledge and skills helps increase life satisfaction, improves well-being and psychological state, which affects the social indicators of countries. Adults with fresh knowledge and approaches can create new ideas, develop innovative projects and make a significant contribution to social progress.

This article is devoted to determining the place of open education in the general system of lifelong education system and analyzing its effectiveness in Ukraine and some European countries. It was established that open education is the tool that gives adults the opportunity to acquire knowledge outside educational institutions and during extracurricular time, and also open education is a driver of human development as an employee, i.e. a part of the labor market and as a result stimulates the development of the country's economy.

Keywords: *lifelong learning, open education, effectiveness of education.*

Introduction. Today, the idea of free and open participation in education is not new, but it remains insufficiently researched and is considered a rather unpredictable phenomenon. In fact, exchange is perhaps the most fundamental characteristic of education. Education is the exchange of knowledge and information with others on which new knowledge, skills, ideas and understanding can be built (Osadchuk, 2022). Thanks to an open educational approach, students can gain additional knowledge, new communication experiences and access to information that can help them succeed. Workers can be retrained to help them in their current job or gain new skills to help them change jobs. Educators can access resources from around the world, and researchers can share data and create new networks between different countries, cultures, and studies.

Analysis of recent research and publications. In scientific studies, such domestic scientists as: S. Pryima, L. Petrenko, V. Osadchuk devoted their research to the issue of open education. It was noted that open education is becoming a new vector for the development of the educational system, especially for the field of lifelong education.

And also, foreign scientists investigated the effectiveness of open education: Kalir, J., Miao, F, Kyriakides, L. and others. In their works, they focused on the fact that education affects human capital and plays an important role in the formation of a person as an employee.

To study the dynamics of publications, we analyzed scientific research on the Scopus database using the key words "open education". As a result of the search, 1582 scientific works were found. On the graph, we can see that there was a sharp jump after 2014, and the beginning of growth can be considered the beginning of the 2000s. The number of articles for the entire period is small, which indicates the relevance of the topic today. It can be said that the concept of open education and adult education developed in the same period (Fig.1.).

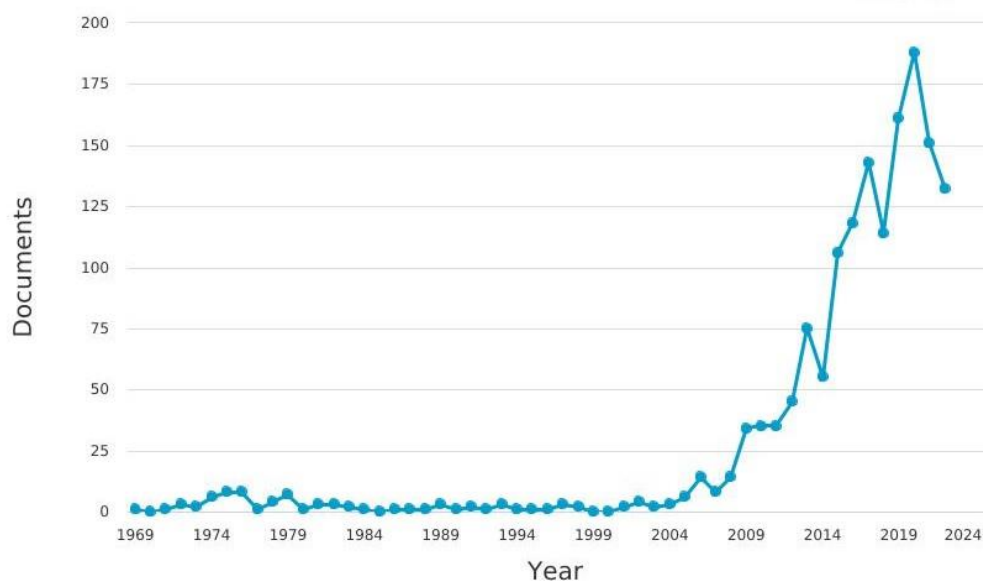


Fig. 1 – Dynamics of publications by the keyword "open education"
Source: Scopus database

The purpose of the article is research and analysis of the effectiveness of open education in the lifelong education system.

Formulation of the main material. Open education is an approach to learning that provides access to educational resources and the acquisition of knowledge and skills regardless of residence, geographic limitations, or formal educational institutions. Open education uses a variety of methods and tools for distance learning, including video lectures, interactive courses, webinars, online platforms and other electronic resources (Lapum, et al., 2022). This approach allows students to independently choose educational materials, pace and methods of learning, as well as use available resources to acquire knowledge and develop their skills.

One of the main advantages of open education is that it expands educational opportunities for those who previously did not have the opportunity or access to formal education. It also allows people to study at their own pace and combine studies with work or other commitments. In addition, open education promotes the spread of innovative ideas and cooperation between people from different countries and cultures (Lee, 2020).

In today's life open education has become especially popular thanks to the development of the Internet and e-learning technologies. The more people have access to the Internet, the more opportunities they have to get quality education through open educational resources.

Open education is a general term that covers different concepts. It includes not only open educational resources and open research results, but also strategic decisions, learning methods, individual and institutional collaboration, recognition of non-formal learning and different ways of making content accessible (Kalir, 2020).

The European Commission's definition of open education is: "A method of learning, often using digital technologies. Its aim is to increase access and participation for all by removing barriers and making learning accessible, rich

and adaptable for all. It provides multiple ways to teach, learn, accumulate and share knowledge. It also provides and connects various avenues of access to formal and non-formal education" (Zawacki-Richter et al, 2020).

The system of open education is directly included in the system of lifelong learning. The base of open education is open educational resource (OER). It is a learning resource that can be modified and extended because its creator has given permission for others to do so. An individual or organization creating an OER may include presentation slides, podcasts, lesson plans, images, lesson plans, lesson videos, maps, worksheets, worksheets, pages, and even entire textbooks. They give up some, but not all, of the copyright in their work, usually through legal means such as a Creative Commons license, which allows others to freely access, reuse, translate, and modify it (Hilton III, 2020).

The open education model is most suitable for adults, as they can plan to study after work or sometimes even during work, or even on weekends, which is not possible with formal education (Huang et al, 2020). First of all, online education has gained popularity, and a massive open online course (MOOC) stands out among it. This is an online course that anyone with a computer and internet access can take. Such courses are called "massive" because they can be attended by more students than a traditional educational institution allows, meaning that a given MOOC can attract hundreds (or even thousands) of students. Today, many universities have joined organizations that seek to provide quality education through MOOCs, and educational service providers such as adult education centers have practiced open online courses even earlier, as they deal with adult students who already have separate lives from education (Tlili et al, 2023).

Among the providers of such courses, we can single out edX – a non-commercial educational partnership founded in 2012 by the Massachusetts Institute of Technology (MIT) and Harvard University. Students register, take and complete courses online. edX released the source code for its online learning platform back in 2013. Developers can download it and use it to help with development (Berestok, 2023).

Similar online education initiatives include Khan Academy and Coursera. The degree to which different MOOCs license their materials for remixing and reuse varies from institution to institution. As digital technologies become one of the main engines of educational modernization, open education is becoming increasingly important for European and global higher education and economy. The use of digital technologies for teaching and learning is no longer limited to open and virtual universities, but extends to all types of institutions, from traditional to avant-garde.

Openness in education is an important item on the European policy agenda for several reasons. First, it reduces or eliminates barriers to learning (such as cost, geography, time, and entry requirements). This gives learners the flexibility to upgrade and retrain at low or almost no cost.

Second, modern open education supports the modernization of higher education in Europe, as it is largely implemented with the help of digital technologies. Finally, it opens the possibility to combine non-formal and formal education. This can be achieved if higher education institutions and other accrediting bodies recognize the qualification certificates they issue to students (Kyriakides et al., 2023).

Stakeholders should explore ways to support open education practices. Dialogue should be sought to create a common vision of open education in Europe. Many potential consumers of educational services are forced to work and cannot continue their education at universities. The use of distance educational technologies significantly saves the time spent on training and provides an opportunity for training, retraining and professional development without breaking away from the main activity (Paskевичius & Irvine, 2019). Modern workers have to undergo retraining on average four to six times during their career. Distance education technologies are ideal for solving the problem of lifelong learning. The use of modern technologies makes the educational process continuous and expands the circle of consumers of educational services. Open education enables every person to develop his knowledge, skills and abilities throughout his life. Students can choose their own curriculum and plan their classes.

When talking about changes in politics, it is impossible to bypass the economic side of this issue. The economic efficiency of open education has many aspects that depend on the context and goals of the education system.

Lowering the cost of education. Open education can help lower the cost of education because open online courses and materials are available for free or for a small fee. This gives more people access to quality education, regardless of their financial means.

Global reach: Open education provides educational opportunities to people around the world. It provides access to educational resources and materials regardless of geographic location or socioeconomic status. This can improve educational and employment opportunities in regions with limited resources (Maryenko & Kovalenko, 2023).

Open education can use innovative learning methods such as video lectures, interactive courses and gaming technologies. This makes the learning process more interesting, effective and accessible for students. Open education also gives educators and organizations access to a wide range of learning resources and experiences.

Capacity building: Open education can contribute to the development of professional and personal learning skills. People can learn new subjects, improve existing skills and increase their competitiveness in the job market. This can have a positive impact on the economy by providing skilled workers and entrepreneurs.

Increasing innovation: Open education encourages knowledge sharing and collaboration between educators, researchers and students from different countries (Ostroga et al., 2022). This can contribute to the development of innovative ideas, research and technological progress.

It is worth noting that the economic efficiency of open education can be measured by a number of indicators, such as a decrease in education costs, an increase in employment, an increase in labor productivity and GDP growth (Menzli et al., 2022). However, in order to assess the specific situation, detailed analysis and research is required in the context of specific educational systems and economic environments.

Among the indicators that characterize the level of participation in education, we studied the dynamics of the share of adults participating in education. For comparison, Ukraine and Finland were taken as exemplary

countries in the field of adult education. Therefore, we see that the share of participation differs by almost three times. Moreover, even with such high indicators, Finland shows growing dynamics. What does this say? The fact that the country saw an economic benefit in such an education is the first thing. Secondly, such dynamics indicate the interest of the person himself in education, since adult education provides opportunities for increasing income or career opportunities.

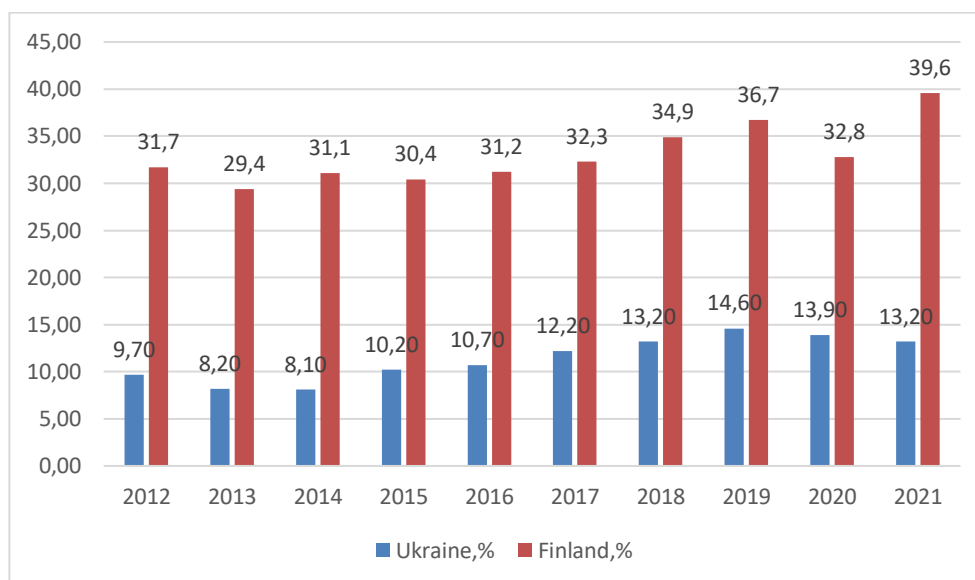


Fig. 2 – Dynamics of adult participation in education in Ukraine and Finland, %

Source: compiled on the basis of statistical and informational materials of Eurostat

Open adult education has certain advantages, but it can also have disadvantages. Lack of structure: Open adult education can be less structured than traditional education because it is often delivered in the form of online courses or self-study. Some adults may find it difficult to organize the learning process and sort the material to study.

Lack of control and motivation: The physical absence of the teacher and lack of contact with other students can lead to a lack of control and motivation among students. Some adults may find it difficult to maintain interest and discipline while learning material.

Lack of practical experience: Some practical skills, especially those that require hands-on interaction with teachers and staff, are difficult to acquire in an open education setting. For example, skills such as communication, leadership and teamwork may require active interaction with other students and teachers.

Uncertainty about the recognition of degrees and certificates: Some employers and institutions may not recognize degrees and certificates obtained through open education at the same level as traditional education. This can limit the possibilities of career growth and obtaining recognized positions.

Lack of personal interaction and networking: Participants in open adult education may not have the same personal contact with teachers and other students as in traditional educational institutions. This can limit opportunities for collaboration, exchange of ideas, and professional networking.

It should be noted that many of these shortcomings can be overcome with

proper organization and support from the institution, teachers and students themselves. Providing support, motivation and opportunities to share experiences and network is critical to the success of open adult education (Yaraş & Gündüzalp, 2021). Open education for all citizens is an important factor in the development of society. It can be offered several recommendations for the state in the field of open education:

Develop a strategy for open education: The state should develop a national strategy for open education, which would define goals, priorities and policies in this area. This strategy should take into account the development of digital technologies, access to open resources and the principles of open learning (Petrenko, 2020).

Creation of open educational resources: The state should encourage the development and distribution of open educational resources (OER). This can be done by funding OER development projects, supporting pedagogical teams that create these resources, and popularizing the use of open educational materials in educational institutions.

Development of open learning platforms: Countries can create or support open learning platforms that provide free access to open courses, lectures, learning materials and other resources. Such platforms can be online or organize communities for knowledge sharing and collaboration between participants (Priyma, 2015).

Providing access to the Internet. It is desirable for the state to create conditions for all citizens to have access to high-quality and affordable Internet. This includes expanding the network of Internet providers, developing public Wi-Fi networks, and providing financial support to educational institutions to ensure Internet access.

Improvement of teachers' qualifications. The state should ensure the professional development of teachers in the field of open education (Wang et al., 2021). Teachers should be trained to use open resources and digital tools in the educational process, understand the principles of open learning and promote active learning using open resources. **Involvement of communities.** The state should support public involvement in the development and use of open educational resources. This can be done by facilitating the organization of meetings, conferences, webinars and other forms of communication for sharing experiences and mutual support.

Recognition of results of open education: The country can develop a system of recognition and accreditation of results of open education. This can help increase the motivation of students and professionals to use open resources and self-education. These recommendations can help governments improve the availability, quality and use of open education, and expand learning opportunities to support economic growth.

Conclusions. Based on the above, it can be assumed that open education is an integral part of the lifelong education system and provides a person with access to information and education. Open education has the potential to transform learning opportunities and economic development. It offers flexibility, accessibility and diversity to students from all over the world, regardless of their location or socio-economic status, underscoring its economic importance and effectiveness. In Ukraine, the percentage of participation in adult education is three times lower than in Finland, which suggests that Ukraine underestimates

the benefits of adult education. However, open education has its challenges. For a helpful effect, measures should be taken by the state regarding access to rejected education, as well as its cost.

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Conflict of Interest and other Ethics Statements

The authors declare no conflict of interest.

References

- Adult participation in learning. URL : https://ec.europa.eu/eurostat/web/products-datasets/-/sdg_04_60.
- Berestok, O. (2023). Electronic educational resources and open electronic educational resources as ICT tools in the implementation of distance learning in higher educational institutions. *Engineering and Educational Technologies*, no. 67.
- Hilton III, J. (2020). Open educational resources, student efficacy, and user perceptions: A synthesis of research published between 2015 and 2018. *Educational Technology Research and Development*, 68 (3), pp. 853-876.
- Huang, R., Tlili, A., Chang, T. W., Zhang, X., Nascimbeni, F., & Burgos, D. (2020). Disrupted classes, undisrupted learning during COVID-19 outbreak in China: application of open educational practices and resources. *Smart Learning Environments*, 7, pp. 1-15.
- Kalir, J. (2020). Social annotation enabling collaboration for open learning. *Distance Education*, 41 (2), pp. 245-260.
- Kyriakides, L., Panayiotou, A., & Antoniou, P. (2023). Establishing a comprehensive theory of teaching and learning: The contribution of the dynamic model of educational effectiveness. *Theorizing Teaching: Current Status and Open Issues*, pp. 131-157.
- Lapum, J., Bailey, A., St-Amant, O., Garmaise-Yee, J., Hughes, M., & Mistry, S. (2022). Equity, diversity, and inclusion in open educational resources: An interpretive description of students' perspectives. *Nurse Education Today*, 116, pp. 1054-1059.
- Lee, K. (2020). Who opens online distance education, to whom, and for what? *Distance Education*, 41 (2), pp. 186-200.
- Maryenko, M., & Kovalenko, V. (2023). Artificial intelligence and open science in education. *Physical and Mathematical Education*, 38 (1), pp. 48-53. DOI : <https://doi.org/10.31110/2413-1571-2023-038-1-007>.
- Menzli, L., Smirani, L., Boulahia, J., & Hadjouni, M. (2022). Investigation of open educational resources adoption in higher education using Rogers' diffusion of innovation theory. *Heliyon*, 8 (7).
- Osadchuk, V. (2022). The development of open education as a phenomenon of the 21st century. *Adult education: theory, experience, perspectives*, 21 (1), pp. 58-67.
- Ostroga, M., Shamonya, V., & Shershen, O. (2022). Digital educational platforms as a tool for implementing non-formal education. *Education. Innovation. Practice*, 10 (4), pp. 27-36.
- Paskevicius, M., & Irvine, V. (2019). Open Education and Learning Design: Open Pedagogy in Praxis. *Journal of Interactive Media in Education*, 2019 (1).
- Petrenko, L. (2020). Strategic guidelines for the professional development of scientific and pedagogical workers in the conditions of open education. *Bulletin of Postgraduate Education. Pedagogical Sciences series*, 13 (42), pp. 170-184.
- Priyma, S. (2015). Theoretical and methodological principles of designing and functioning of systems of open education of adults in Ukraine (Doctoral dissertation, Bohdan Khmelnytskyi Melitopol State Pedagogical University).
- Tavakoli, M., Hakimov, S., Ewerth, R., & Kismihók, G. (2020, July). A recommender system for open educational videos based on skill requirements. In *2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT)*. IEEE, pp. 1-5.
- Tlili, A., Nascimbeni, F., Burgos, D., Zhang, X., Huang, R., & Chang, T. (2023). The evolution

- of sustainability models for Open Educational Resources: Insights from the literature and experts. *Interactive Learning Environments*, 31 (3), pp. 1421-1436.
- Wang, V., Torrissi-Steele, G., & Reinsfield, E. (2021). Transformative learning, epistemology and technology in adult education. *Journal of Adult and Continuing Education*, 27 (2), pp. 324-340.
- Yaraş, Z., & Gündüzalp, S. (2021). E-readiness in the effectiveness of distance education. *Quarterly Review of Distance Education*, 22 (3), p. 47.
- Zawacki-Richter, O., Conrad, D., Bozkurt, A., Aydin, C. H., Bedenlier, S., Jung, I., ... & Kerres, M. (2020). Elements of open education: An invitation to future research. *International Review of Research in Open and Distributed Learning*, 21 (3), pp. 319-334.

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ЕФЕКТИВНІСТЬ ВІДКРИТОЇ ОСВІТИ В СИСТЕМІ ОСВІТИ УПРОДОВЖ ЖИТТЯ

Анотація. Відкрита освіта відіграє на сьогоднішній день важливу роль у системі освіти упродовж життя. Саме відкрита освіта дає можливість дорослим навчатись у доступний для них час та отримувати формальну та неформальну освіту. Відкрита освіта дорослих є не лише інструментом особистого розвитку, а й важливим елементом соціального прогресу, демократії та побудови суспільства, а також економіки, що трансформується. Забезпечення доступу до якісної освіти дорослих має важливе значення для досягнення сталого економічного розвитку країни та забезпечення гідної якості життя для всіх громадян.

Відкрита освіта створює можливості для дорослих навчатися протягом усього життя, що допомагає змінювати кар'єру, збільшувати кваліфікацію та стежити за оновленням знань у сучасному світі. Країни з високим рівнем освіченості населення мають переваги у високотехнологічних галузях, що допомагає стимулювати економічний розвиток і залучення інвестицій. Навички, отримані через відкриту освіту, допомагають дорослим знайти кращу роботу або підвищити свою конкурентоспроможність на ринку праці. Забезпечення доступу до освіти для всіх верств суспільства допомагає знизити соціальні розбіжності і забезпечити рівні можливості для всіх.

Як інноваційний феномен відкрита освіта сприяє розвитку критичного мислення та аналітичних навичок, що дозволяє дорослим бути більш інформованими громадянами і зробити свідомі вибори. Можливість навчання та розвитку допомагає дорослим реалізовувати свій потенціал, знаходити нові захоплюючі інтереси та досягати особистого зростання. Отримання нових знань та навичок сприяє підвищенню задоволеності життям, покращує самопочуття та психологічний стан, що впливає на соціальні показники країн. Дорослі зі свіжими знаннями і підходами можуть створювати нові ідеї, розвивати інноваційні проекти і внести вагомий внесок у суспільний прогрес.

Дана стаття присвячена визначенню місця відкритої освіти в загальній системі освіти упродовж життя та аналізу її ефективності в Україні та в деяких країнах Європи. Було встановлено, що відкрита освіта є тим інструментом, що надає дорослим можливість здобувати знання поза навчальними закладами та в позанавчальний час, а також відкрита освіта є драйвером розвитку людини як працівника, тобто частини ринку праці і як наслідок д стимулює розвиток економіки країни.

Ключові слова: навчання упродовж життя, відкрита освіта, ефективність освіти.

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