

## **DIGITAL SKILLS AS STRATEGIC DIRECTION FOR DIGITAL TRANSFORMATION OF BUSINESS AND SOCIETY**

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### **INTRODUCTION**

Digital transformation of states is the main priority of both the EU countries, which focus all their resources on the digital economy development and digital transformation, and Ukraine, which has declared the course for the development of a digital state and society. The development of digital skills is one of the priorities of the the Digital Decade policy programme 2030. It states that the digital world should be based on European values, according to which every person should be provided with the opportunity to use digital technologies. For this it is necessary to ensure a sufficient level of digital literacy skills. The success of the digital transformation of states, business and society depends on the level of digital skills, as well as the implementation of reforms, improving the business environment, ensuring motivation, increasing investments in digital technologies and building digital infrastructure.

The development of digital skills of the population of Ukraine is currently identified as one of the government's priorities in the digital transformation processes and is of crucial importance for increasing efficiency and stimulating the digital economy, creating jobs and ensuring social progress in Ukraine.

The development of digital economy and society in Ukraine requires citizens, managers, professionals, specialists, employees with developed digital skills. Therefore, urgent and drastic measures to improve the processes of standardization, formation and assessment of the formation of digital skills are needed. Being digitally literate means being competitive in the job market.

Finally, one of the conditions for the integration of Ukraine into the EU is the digital transformation of state services, businesses and all processes in the country. Implementation of this is impossible without citizens who have digital skills and are ready to receive services online.

Features of the development of digital literacy of Ukrainians were studied by L. O. Ligonenko, O. V. Strutynska, O. O. Khandiy, O. M. Trifonova and other scientists, as well as experts of the Ministry of Digital Transformation of Ukraine. Most of the scientific and research papers devoted to the formation of digital skills are focused on the formation of digital competencies of the population, personnel training, etc. However, the study of the digital skills of the population needs special attention and further deepening. Identifying

problems in the acquisition of digital skills by citizens is necessary for solving important strategic tasks of eliminating the digital gap in society, developing entrepreneurship, accelerating the digital transition, and increasing the involvement of the population in the digital environment in Ukraine.

### **1. The concept of digital skills and their research in the EU**

Experts of the World Economic Forum (2018) predict that within the next 5 years up to 75 million jobs in the 20 largest countries will be displaced by new technologies. Technological advances will create millions of new jobs and fundamentally change the skill requirements of existing jobs<sup>1</sup>. These and other forecasts are based on the purposeful efforts of the governments of all countries and supranational institutions to solve the problem of low digital skills, to ensure the readiness of citizens to live and work in new conditions and to get maximum benefits from the new opportunities of the digital economy and digital markets.

The concepts of digital skills, digital literacy and digital competence are not new, but they are under-researched. In particular, in the study of A. Ferrari, digital competence is defined as the confident, critical and creative use of information and computer technologies (ICT) to achieve goals related to work, education, leisure, and participation in society<sup>2</sup>. Digital competence is a key competence, the presence of which contributes to the formation and development of other key competences.

The concept of digital literacy and related skills and competences today does not have a generally accepted interpretation, as pointed out by the experts of the research center of the European Parliament. Several terms such as “digital literacy”, “digital competence”, “ICT skills” and “e-skills” are often used interchangeably to describe digital skills<sup>3</sup>.

Digital literacy is related to a set of knowledge, the application of which forms certain digital skills, which, in turn, determine digital competence. In Europe, digital competence was defined by the EU Parliament in 2006 as one of the key competences important for the life of every person in the information society. In the EU’s recommendations on key competences for lifelong learning, digital competence entails the confident and critical use of

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<sup>1</sup> World Economic Forum. The Future of Jobs Report 2018. URL: [https://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2018.pdf](https://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf) (accessed 17.06.2024)

<sup>2</sup> Ferrari A. DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe. Luxembourg: Publications Office of the European Union, 2013. 50 p. URL: <https://publications.jrc.ec.europa.eu/repository/handle/JRC83167> (accessed 17.06.2024).

<sup>3</sup> European Parliament. Digital skills in the EU labour market. 2017. 22 p. URL: [https://www.europarl.europa.eu/RegData/etudes/IDAN/2017/595889/EPRS\\_IDA\(2017\)595889\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2017/595889/EPRS_IDA(2017)595889_EN.pdf) (accessed 17.06.2024).

ICT for work, leisure and communication<sup>4</sup>. This requires people to have basic digital skills such as using computers and other computing devices to find, evaluate, store, create, present and share data, as well as the ability to communicate and work with Internet services for shared use<sup>5</sup>.

Digital literacy is an even broader concept, as just using a smartphone or laptop and having access to the Internet does not mean digital literacy. Digital literacy is the ability to effectively and safely use modern digital technologies in work and education, in professional and personal development. Digital competence includes various skills and abilities, while the concepts of digital literacy and competence are equated. The most generalized definition of digital skills is the definition given by experts of the European Parliament, which states that digital skills cover a number of basic and highly developed skills that allow the use of digital technologies (digital knowledge), on the one hand, and basic cognitive, emotional or social skills necessary for the use of digital technologies, on the other hand.

The economic implications of the development of the digital economy and related user skills are important at regional and global levels. Along with positive economic effects, social consequences are also important. Thus, the OECD countries recognized the need for the development of the digital economy in order to increase competitiveness<sup>6</sup> and counter the main challenges of today, such as reducing the level of unemployment, inequality, and reducing poverty<sup>7</sup>.

Digital transformation is one of the key priorities for the EU. The European Commission aims to create all the necessary conditions for digital inclusion and eliminating the digital skills gap. For this purpose, numerous initiatives and projects have been introduced and implemented, in particular:

- Digital Economy and Society Index (DESI);
- European Platform for Digital Skills and Workplaces;
- The Digital Europe Programme (DIGITAL) and others.

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<sup>4</sup> Recommendation 2006/962/EC of the EU Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. Official Journal of the European Union L 394/10 of 30.12.2006. URL: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:en:PDF> (accessed 17.06.2024)

<sup>5</sup> European Commission. Digital skills and jobs. URL: <https://digital-strategy.ec.europa.eu/en/policies/digital-skills-and-jobs> (accessed 17.06.2024)

<sup>6</sup> OECD. Competitiveness and Private Sector Development. URL: [https://www.oecd-ilibrary.org/development/competitiveness-in-south-easteurope\\_9789264298576-en](https://www.oecd-ilibrary.org/development/competitiveness-in-south-easteurope_9789264298576-en) (accessed 17.06.2024)

<sup>7</sup> Kliuchnyk R.M. Osnovni chynnyky bidnosti v suchasnykh umovakh [The main factors of poverty in modern conditions]. *Yevropeiskyi vektor ekonomichnoho rozvytku* [European vector of economic development]. 2022. No 1(32). P. 20–30.

The Digital Europe Programme highlights that digitalisation not only leads to increased productivity, but can also help to address current policy challenges by promoting inclusion by addressing the special needs of disadvantaged social groups.

Strategy for the development of the digital economy and transformation of European business until 2030 “Digital Decade” is connected with the 2030 Digital Compass.<sup>8</sup> The Digital Decade initiative sets EU goals that will guide the digital transformation until 2030.

All of the listed initiatives seek to establish or rely on monitoring the state of digital skills, which is necessary for their objective assessment for further use as an indicator of the progress achieved, cross-country comparisons, and verification of the effectiveness of implemented management decisions and practices (frameworks).

According to the objectives of the European Digital Decade, by 2030 at least 80% of the adult population aged 16-74 should have at least basic digital skills and abilities.

To this end, such initiatives as the European Skills Agenda, the Digital Education Action Plan 2021-2027, and the Digital Compass (DigComp 2.1) have been implemented<sup>9</sup>.

The European Commission continues to initiate and implement measures to overcome the digital gap and create strategies and projects to increase the level of digital skills in the EU. Most of these initiatives are part of the EU4Digital Programme, in particular the establishment of National Coalitions for Digital Skills and Jobs in four key areas: digital skills for all, digital skills for the workforce, digital skills for ICT professionals and digital skills in education<sup>10</sup>. The EU “DigComp 2.1: The Digital Competence Framework for Citizens” helps citizens assess their knowledge in the digital sphere and identify gaps.

Possessing basic general digital skills and competencies requires people to have certain knowledge, including: how to perform at least one activity in each of the five different competency areas. Generic digital skills and competencies cover five areas, such as: information and information literacy, communication and collaboration, digital content creation, security, and solving problems.

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<sup>8</sup> Europe’s Digital Decade: digital targets for 2030. URL: [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en) (accessed 17.06.2024)

<sup>9</sup> Europe’s Digital Decade: digital targets for 2030. URL: [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en) (accessed 17.06.2024)

<sup>10</sup> National Coalitions for Digital Skills and Jobs. URL: <https://digital-strategy.ec.europa.eu/en/policies/national-coalitions> (accessed 17.06.2024)

The key performance indicator in the context of the Digital Decade is the Digital Skills Indicator, which outlines the EU's vision for digital transformation.

Digital Economy and Society Index (DESI) measures the level of digital transformation in the EU. The index reflects the generalized dynamic indicators of the development of the digital economy in the EU countries, including the digital skills of citizens. The above Digital Skills Indicator is part of the annual DESI report, which tracks EU member states' progress in digital skills development.

The Digital Skills Indicator is based on the Digital Competence Framework for Citizens, which is populated with data collected from a survey on ICT use in households and individuals for individual use. The Indicator covers four areas of competence: information, communication, content creation and problem solving. There is a methodology used to define and calculate the indicators for each of the four areas and the overall indicator.

The statistics show that in 2023 the share of people aged 16 to 74 who had at least basic digital skills was highest in the Netherlands (78.94%), Finland (79.19%) and Ireland (70.49 %). At the other end of the range, the lowest share is recorded in Romania (27.82%), Bulgaria (31.18%) and Poland (41.93%). 53,92% of EU citizens had at least basic digital skills, 26,46% had above basic digital skills<sup>11</sup>.

A large part of the EU population still lacks basic digital skills, even though most jobs require them. These people cannot join the digital economy and the information society due to a low level of digital literacy.

The impact of digitalization on the economy of the EU countries, in particular on the labor market and education, showed the presence of a digital gap in society, which needs to be overcome as soon as possible. The high level of digital skills of the population stimulates the development of Internet business, electronic trade, and online services. Maximizing the socio-economic effect of the digital transformation of organizations, government institutions, and small and medium-sized businesses requires the development of infrastructure to ensure the transition to the online environment, support the creation of online platforms, web solutions, and IT startups. A key aspect of the digital transition is a high level of digital literacy not only among employees, but also among the population who are consumers of digital services.

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<sup>11</sup> Digital Economy and Society Index (DESI). 2023. URL: [https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/charts/desi-indicators?indicator=desi\\_3c1&breakdown=ent\\_sm\\_xfin&period=desi\\_2023&unit=pc\\_ent&country=AT,BE,BG,HR,CY,CZ,DK,EE,EU,FI,FR,DE,EL,HU,IE,IT,LV,LT,LU,MT,NL,PL,PT,RO,SK,SI,ES,SE](https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/charts/desi-indicators?indicator=desi_3c1&breakdown=ent_sm_xfin&period=desi_2023&unit=pc_ent&country=AT,BE,BG,HR,CY,CZ,DK,EE,EU,FI,FR,DE,EL,HU,IE,IT,LV,LT,LU,MT,NL,PL,PT,RO,SK,SI,ES,SE) (accessed 17.06.2024)

## **2. Digital skills in Ukraine and their role in economic growth**

Until the beginning of 2018, the term “digital skills and competences” was only partially mentioned in officially adopted normative legal acts in Ukraine related to education, development of information society and digital technologies.

In particular, the Resolution of the Cabinet of Ministers of Ukraine dated November 28, 2012 No. 1134 “On the introduction of the National System of Information Society Development Indicators” defines several indicators. These indicators can be classified as those that, to a certain (but not sufficient) extent, provide an opportunity to measure the level of digital skills and competencies in Ukraine.

The Law of Ukraine “On Education” recognizes information and communication competence as one of the key competences needed by every modern person for a successful life.

The need to ensure digital literacy of Ukrainian citizens is mentioned in the “Strategy for the development of the information society in Ukraine” until 2020, approved by the Decree of the Cabinet of Ministers of Ukraine dated May 15, 2013 No. 386. In particular, one of the strategic goal is ensuring computer and information literacy of citizens primarily by creating an education system focused on the use of the latest information and communication technologies in the formation of a comprehensively developed personality, and ensuring the continuity of education.

In 2017, the Ministry of Economic Development developed the “Digital Agenda of Ukraine 2020”, which is the basis for the implementation of the digital transition and the formation of a digital economy in Ukraine. This document reflects the role of digital competencies of the population in the process of digital transformation of the country.

On the basis of this document, the Cabinet of Ministers of Ukraine in 2018 approved the “Concept for the Development of the Digital Economy and Society of Ukraine for 2018-2020” and a plan of measures for its implementation. The Concept includes strategic measures for digitalization of the economy and society, development of digital infrastructure, acquisition of digital competences by citizens, and also declares priority areas and projects of digitalization, stimulation of the internal market of production, use and consumption of digital technologies. The Concept outlined more specific steps in building a system for improving the digital literacy of the population of Ukraine, in particular:

- 1) making changes to the register of professions and developing a program for the introduction of digital specialties into the relevant curricula of specialized educational institutions;

2) development of a draft act on the development of digital skills of citizens and the modernization of preschool, general secondary, out-of-school, professional (vocational and technical), higher education and adult education systems, including taking into account public-private partnership models and the creation of appropriate incentives for the development of informal education.

Therefore, according to the Concept, the creation and implementation of a national training program for general and professional digital competences and knowledge is indicated as one of the priority tasks on the way to the accelerated development of the digital economy.

To increase the digital literacy of the population, on March 3, 2021, the Cabinet of Ministers approved the “Concept of Development of Digital Competencies until 2025”. Its purpose is the development and implementation of digital technologies in all spheres of society and the formation of digital skills. As part of the implementation of the Concept, it is planned to:

- form and develop the digital skills of the population;
- ensure legal regulation of state policy in the field of digital skills formation;
- develop the necessary changes to the legislation;
- define the system and description of the components of digital competence;
- determine the requirements for the level of possession of digital skills in different categories of employees;
- create indicators for monitoring the state of development of digital competences;
- and raise the level of awareness of citizens about the dangers on the Internet.

The “Concept of Development of Digital Competencies until 2025” outlines the challenges related to the development of digital competences in Ukrainian society, determines the ways to overcome them and the expected results of its implementation, lays the groundwork for the creation of a national strategy and a strategic action plan for the development of digital competences in society.

The application of the provisions of the Concept will contribute to the general increase in the level of digital literacy of Ukrainians, normalize the requirements for digital competences in professional standards and allow the development of a methodology for measuring and implementing independent certification of the level of digital skills in accordance with the requirements of the labor market. In addition, the implementation of the Concept will significantly accelerate the digital transformation of Ukraine.

The Concept includes important measures to ensure monitoring of digital literacy of the population, improvement of state policy in the field of development of digital skills and competences. The implementation of the Concept's measures will contribute to increasing the level of digital literacy of Ukrainians and their more active involvement in the digital environment.

The Concept is a significant contribution to implementation of the EU-Ukraine Association Agreement and further harmonization of legislation on the way to the EU Digital Single Market<sup>12</sup>. Attracting more qualified (in terms of digital skills) employees will contribute to increasing the productivity and efficiency of business processes in companies, will accelerate the development of digital entrepreneurship, the creation of new jobs and the digital transformation of business in general.

Also, the Ministry of Digital Transformation of Ukraine published the Digital Competence Framework for Ukrainian citizens on the basis of:

- The EU DigComp 2.1: Digital Competence Framework for Citizens, which offers a tool to improve citizens' digital competence and includes 8 proficiency levels and examples of use;

- Other recommendations in the field of digital competences from European and international institutions, which are adapted to the national, cultural, educational and economic characteristics of Ukraine.

This framework is a tool created to improve the level of digital competences of Ukrainians, to help in the development of state policy and planning of educational initiatives aimed at increasing the level of digital literacy and the practical use of IT technology tools and services by specific target groups of the population.

In November 2020, the Ministry of Digital Transformation for the first time launched a national digital literacy test – “Digigram 1.0”. This was a beta version of the test, which provided an opportunity for every citizen to personally find out his level of digital literacy and, if necessary, add a certificate of passing the test to his resume on job search portals. To 2021, more than 155,000 users have already started to pass “Digigram”, and almost 70% have received certificates.

In May 2021, the Ministry of Digitization launched “Digigram 2.0”, based on the adapted Digital Competence Framework for Ukrainian citizens. It was created by Ukrainian experts on the basis of the EU Digital Competence

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<sup>12</sup> Dąbrowski Ł. D., Suska M. The European Union Digital Single Market Europe's Digital Transformation. New York: Routledge, 2022. 174 p.



Framework for Citizens (DigComp 2.1.) with 8 proficiency levels and examples of use<sup>13</sup>.

Today, the Digital Competence Framework for Ukrainian citizens includes 4 dimensions, 6 areas, 30 competencies and 6 levels of digital skills. The digital competences of Ukrainians are measured in six areas:

- Basics of computer literacy;
- Information and media literacy. Ability to work with data;
- Creating digital content;
- Communication and interaction in the digital society;
- Secure digital environment;
- Solving technical problems. Lifelong learning in the digital society<sup>14</sup>.

For Ukraine, the target indicators for digital skills presented in the Digital Compass 2030 are guidelines: by 2030 in the EU, 80% of the population will master basic digital skills. According to the plans of the Ministry of Digital Transformation, it is planned to train 6 million Ukrainians in digital skills in 3 years, starting in 2021.

The Ministry of Digital Transformation of Ukraine assesses the level of digital skills of the population every 2 years since 2019. According to the research of the Ministry, in 2019, 53% of Ukrainians had digital skills below the “basic level”. In 2021, the level of digital skills has increased. The share of Ukrainians with digital skills below the “basic level” decreased by 5.2% (1.42 million people), and currently amounts to 47.8%. The share of Ukrainians who have no digital skills decreased by 4% or by 1.09 million people. Information (78.9%) and communication skills (79.2%) are more developed. The least developed are the skills of solving life problems (55.8%) and creating digital content (36.8%)<sup>15</sup>.

According to the findings of the 2023 study, 60% of the population of Ukraine have basic and above basic digital skills (47% in 2019 and 52% in 2021). Over 4 years, the share of people without digital skills decreased by 8% (decrease from 15,1% in 2019 to 7,2% in 2023). The share of people with

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<sup>13</sup> European Commission. DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use. URL: <https://publications.jrc.ec.europa.eu/repository/handle/JRC106281> (accessed 17.06.2024)

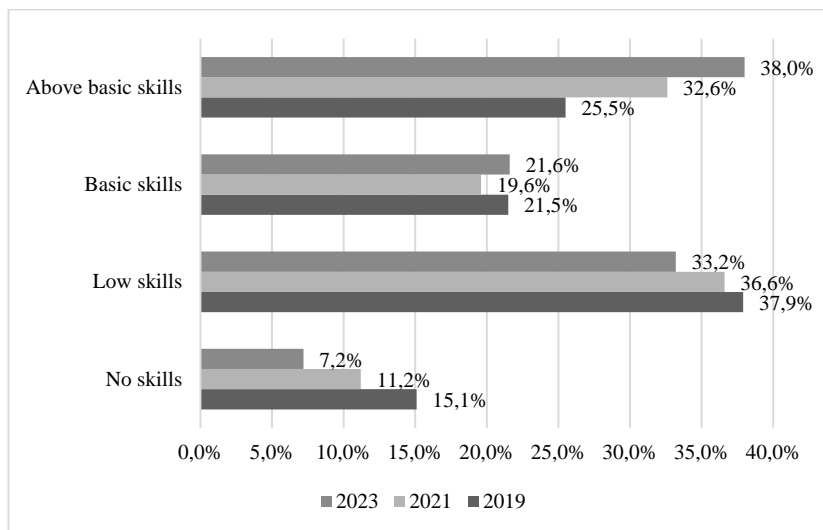
<sup>14</sup> Government Portal. Ministry of Digital Transformation launches a national test for digital competence. 2020. URL: <https://www.kmu.gov.ua/en/news/mincifra-zapuskaye-cifrogram-nacionalnij-test-na-cifrovu-gramotnist> (accessed 17.06.2024)

<sup>15</sup> Diia. Education. Research on digital skills of Ukrainians 2019-2023. Ministry of Digital Transformation of Ukraine. 2024. URL: <https://osvita.diia.gov.ua/en/research> (accessed: 18.06.2024).

digital skills below the basic level decreased from 53% in 2019 to 40.4% in 2023<sup>16</sup>.

The positive trend of an increase in the share of the population with digital skills indicates the steady development of digital literacy in the country. In addition to improving quantitative indicators, we observe the improvement of digital skills. The share of people with above basic digital skills increased by 12.5 percentage points compared to 25,5% in 2019, reaching 38%<sup>17</sup>.

Fig. 1 contains the the dynamics of digital skills of Ukrainians according to the conducted research.



**Figure 1. Share of the adult population with a digital skills level in Ukraine in 2019-2023**

*Source: Ministry of Digital Transformation of Ukraine, 2024*

In Ukraine, Cabinet Order No. 774 of September 5, 2023 approved the list of indicators of the Digital Economy and Society Index (DESI) for Ukraine and introduced mandatory monitoring of digital skills according to the DESI methodology of the European Commission.

<sup>16</sup> Diiia. Education. Research on digital skills of Ukrainians 2019-2023. Ministry of Digital Transformation of Ukraine. 2024. URL: <https://osvita.diiia.gov.ua/en/research> (accessed: 18.06.2024).

<sup>17</sup> Diiia. Education. Research on digital skills of Ukrainians 2019-2023. Ministry of Digital Transformation of Ukraine. 2024. URL: <https://osvita.diiia.gov.ua/en/research> (accessed: 18.06.2024).

The Ministry of Digital Transformation has launched a national project on digital literacy “Diia. Education”.

The project covers the national platform for the development of digital skills “Diia. Education” with over 90 free educational series and digital literacy tests, as well as an extensive network of 6,000 partner offline digital education hubs. Strategic partner of the national project “Diia. Education” is the Swiss-Ukrainian EGAP Program implemented by the East Europe Foundation.

Ukrainians through the Unified State Digital Education Portal “Diia. Education” study the basics of using information and communication and digital technologies, cyber security. Free courses on improving digital skills for the public are available on the portal. Ukrainians completed online training and received certificates confirming the presence of digital knowledge and skills.

In addition to the project “Diia. Education” in recent years, a number of initiatives aimed at developing and increasing the level of digital literacy of the population have been launched and implemented.

SMB Hub Ukraine is a free and interactive online training center for small and medium-sized enterprises. The project was launched by the Ministry of Digital Transformation of Ukraine together with Facebook. The training program was developed by Facebook experts and covers the topics of effective presentation of business projects online, building a brand in social media, building relationships with customers, and creating content using free mobile apps. In addition, the platform will include a series of video and written content aimed at helping entrepreneurs in times of digital transformation<sup>18</sup>.

“Entrepreneurial University”, which includes the academic discipline “Innovative Entrepreneurship and Startup Project Management”, which is integrated into the curriculum and launched in 76 universities of Ukraine. The goal of the initiative is to create universities with a strong entrepreneurial culture and startup infrastructure. The program is implemented by the network of YEP startup incubators together with the Ministry of Digital Transformation of Ukraine, the Ministry of Education and Science of Ukraine, the Ukrainian Startup Fund, with the support of the USAID Competitive Economy of Ukraine (USAID CEP) program<sup>19</sup>.

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<sup>18</sup> Facebook. Вебінар «Дізнайтеся, як зміцнити свою компанію» [Webinar "Learn how to strengthen your company"]. URL: <https://www.facebook.com/business/boost/webinars-online-learning> (accessed 17.06.2024)

<sup>19</sup> YEP! Entrepreneurial University. URL: <https://www.yepworld.org/en/university> (accessed 17.06.2024)

“IT-nation” educational program aimed at increasing the number of qualified IT specialists in the eastern region of Ukraine. The program was implemented within the framework of the memorandum between the Ministry of Digital Transformation of Ukraine and Public Association “Global Compact Network in Ukraine” with the support of the United States Agency for International Development within the scope of the USAID project “Economic Support of Eastern Ukraine”<sup>20</sup>.

In the context of the development of digital competences of representatives of the IT industry, the Ministry of Digital Transformation of Ukraine, the State Employment Service of Ukraine, the IT Ukraine Association and IT academies launched a pilot project in Kyiv – the Pathfinder study, aimed at assessing the potential of IT specialists<sup>21</sup>. Its purpose is to help choose a profession in a promising field. Based on the information provided by the user, the artificial intelligence in Pathfinder selects the most relevant profession from the list of relevant IT areas (the project developers previously collected information on what specialists Ukrainian IT companies need). At the second stage, project participants must pass a second test, which determines the general abilities and potential of the candidates. Based on the results of the second test, candidates who will be able to study at the IT academies participating in the project are determined. Training should be paid for by the State Employment Service of Ukraine.

### **3. The impact of digital skills on socio-economic development**

The penetration of digital technologies into business and people’s lives leads to the emergence of new services, types of entrepreneurial activity, adaptation of business models of enterprises to new business conditions, changes in the labor market. Activation of the digitalization processes of the Ukrainian economy provides business with additional competitive advantages and opportunities. However, in order to use them, it is necessary to develop new digital skills and competencies in accordance with modern business practices.

Digital skills are extremely important for the public as well as for businesses and their customers. Managers and specialists must be able to search, systematize, evaluate and analyze data, digital content, possess modern means of online communications, etc. In conditions of intensification of the digital transformation processes in the economy and society, the volume of e-commerce is growing. This contributes to the creation of new jobs, the

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<sup>20</sup> IT NATION HACKS-2020. URL: <https://itnationhacks2020.com/> (accessed 17.06.2024)

<sup>21</sup> Pathfinder. Яка IT-професія підходить спеціально для Вас? [Which IT profession is especially suitable for you]. URL: <https://pathfinder.jobs> (accessed 17.06.2024)

development of entrepreneurship and the increase of tax revenues to the budget, which in turn positively affects the growth of the economies.

First of all, increasing the level of digital literacy of the population requires the formation of a so-called digital culture in society, a deep awareness by citizens of the need to increase the level of their own digital literacy. One of the tasks of the “Concept of Development of Digital Competencies until 2025” is to conduct information campaigns aimed at popularizing digital technologies, digital skills and digital competences, in particular among the population, at the national, regional and local levels.

A person’s digital literacy is the ability to effectively and safely use modern digital technologies in work and education, in professional and personal development. In modern world, digital literacy means a comfortable and fulfilling life in society. After all, the number of online services that surrounds us can significantly facilitate and improve the life of an average citizen. Now people don’t have to waste their time standing in line. Online services are comfort, convenience, time saving. Moreover, digital literacy is necessary in order to effectively use all the opportunities provided by the state.

In the conditions of a full-scale and hybrid information war of Russia against Ukraine, it is important for citizens to resist enemy propaganda, to be able to distinguish fakes and to use digital technologies as effectively as possible for victory and personal security and promoting sustainable development. Online security is crucial nowadays as well as understanding how to protect accounts from being hacked by attackers, getting viruses on device.

Digital literacy is one of the priority directions of the socio-economic development. In times of war, digital skills are one of the competitive advantages for finding remote work, upskilling or reskilling (upgrading skills or retraining). The undeniable advantage of high digital skills is competitiveness in the labor market. Possessing digital literacy, a person has more chances for employment, rapid career advancement and a high level of remuneration. Digital skills facilitate continuous learning. Thanks to digital literacy, everyone will be able to improve themselves every day, take online courses and trainings, learn foreign languages more effectively, to replenish knowledge, to acquire new skills, regardless of age and health status.

Digital literacy will make it easier to live in the country. After mastering digital skills, every Ukrainian will be able to receive government services online, improve the quality of life, and confidently use social networks and the Internet. Thanks to the digital literacy, people have the opportunity for personal development and solving personal needs. They can communicate more often in a convenient format, easily search for the necessary information, make purchases, etc.

With the increase in the pace of development of digital technologies, the introduction of innovative solutions in all spheres of social life, there is a need to improve the quality of training of employees to create an opportunity to modernize the Ukrainian economy in accordance with current realities and the demands of the digital economy.

## **CONCLUSIONS**

Digital transformation of enterprises and society has a positive effect on the development of the economy as a whole. In Ukraine, the main strategic directions of the development of the digital economy are the development of digital infrastructure, digital skills, the sector of information and communication technologies, digitalization of life spheres and sectors of the economy. Digital literacy is a driver of economic growth, entrepreneurship and job creation. The opening of new segments and industries will accelerate the development of industry and business. The digital transformation of Ukraine should provide citizens and businesses with full access to digital infrastructure and high-quality state and social services.

The main steps that Ukraine should take to increase the level of digital competence of the population take into account:

- raising citizens' awareness of the need to implement digital competencies;
- availability of programs for the development of digital competence of various levels;
- close cooperation and purposeful actions to involve citizens in the education of various stakeholders – educational institutions, municipal governments, businesses, etc.

Increasing the level of digital literacy of the population is a key condition for accelerating the digital transformation of Ukraine's economy and integration into the EU. The development of the digital economy changes the structure of the labor and employment market, contributes to the formation of new requirements for professional competences, and increases the demand for specialists in the field of ICT. Employees of all sectors of the economy must master digital skills for working with information using modern means of telecommunications and software products. The population with a sufficient level of digital literacy receives new opportunities for critical and creative use of ICT to achieve goals related to work, employment, education, and recreation. This will ensure a synergistic effect from the processes of digital transformation of the state, business and society.

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