https://doi.org/10.33271/nvngu/2025-3/221

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DIGITAL COMPETENCE OF PUBLIC SERVANTS IN THE CONTEXT OF DEVELOPING A DIGITAL SERVICE-ORIENTED STATE

Purpose. Generalization of the theoretical and applied aspects of the development of civil servants' digital competence in the process of building a digital service state, research on the results of the digitalization processes in the domestic sphere of public administration, justification of the need to form digital competence and determine its ways of development.

Methodology. The study uses a general scientific research methodology: analysis, systematization, synthesis, comparison, and generalization.

Findings. According to the results of the study, the following were established: 1) a number of conceptual and strategic documents approved by the government where digitalization is recognized as one of the priority areas of the national development; 2) existing organizational and legal provisions for the successful implementation of plans for building a digital state; 3) projects to create public digital platforms and tools have been implemented and continue to be implemented; 4) a range of training courses for public servants on the "Diia. Education" online platform and other educational portals, "CDTO Campus" national educational project; 5) positive dynamics of digital literacy indicators of the population since 2019; 6) six Digital Competency Frameworks for different segments of the population and a project for civil servants; 7) a significant improvement in Ukraine's positions in world rankings: EGDI 2024 – *30th* place (+16) and EPI 2024 – *1st* place (+57) among 193 countries, ODM 2024 – *3rd* place (-1) among 35 European participating countries. The European strategic guidelines for the development of the public sector are analyzed: the priority area is digital services and digital markets; digital skills rank topmost on the agenda of European policy.

Originality. The scientific result consists in the substantiation and definition of the component of digital competence, i.e. digital etiquette of a public servant; recommendations for including professional digital skills in the mandatory job description for public service employees; use of specialized programs for the development of digital competence of the "Diia. Education" platform in the programs of advanced training and education of civil servants; proposals for amendments to the higher education standards at the bachelor's and master's levels in Specialty "281 Public Management and Administration" regarding the list of graduate competencies – to include knowledge, skills, abilities that are inherent in the formation of digital competence of a graduate.

Practical value. Determined in applied proposals for the formation of digital competence of public servants

Keywords: *digital competence, civil servants, digital service state, digitalization*

Introduction. The rapid development of the IT sphere and the large-scale implementation of ICT in all spheres of citizens' life, businesses and public services; processes of digitalization of the economy and society; integration of Ukraine into the Single Digital Market of the European Union require the development of human resources with appropriate qualifications. It is the development of digital competencies that is the result of structural changes in the labor market that arise as a result of digital transformations, and one of the key competencies and activity in the conditions of building a digital Ukraine.

The National Economic Strategy for the period until 2030 declares the construction of a digital service state as one of the priorities for the development of Ukraine. The successful implementation of this task requires qualified personnel with knowledge, competence and work skills in using digital technologies in professional life. The efficiency of digitalization of these processes depends on the level of digital competencies of the population and, to an even greater extent, on the digital competencies of public servants. Given the rapid processes of digital transformation in Ukraine, including the public sector of government, the issue of digital competencies requires special attention and in-depth study.

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Literature review. Research into the processes of digitalization, digital competence in the field of public administration is currently on the periphery of scientists and practitioners, both domestic and foreign. Among the representatives of the Ukrainian scientific community, the following have dealt with this issue: I. Zhyliaaev, S. Zelinskyi, O. Karpenko, V. Kuibida, S. Kushnir, N. Novichenko, N. Orlova, G. Shliakhina, N. Piskokha, A. Semenchenko, V. Fostikova, and others.

When investigating the theoretical plane of the issue of digital competence of public authority personnel, it is appropriate to reveal the essence of the definition of "digital competence" (Table 1).

In the Concept of Digital Competence Development approved by the government in 2021, "digital competence is a dynamic combination of knowledge, abilities, skills, ways of thinking, views, and other personal qualities in the field of information, communication and digital technologies, which determines a person's ability to successfully socialize, conduct professional and/or further educational activities using such technologies" [6].

Regarding the concept of "digital competence of public servants", we propose to consider it as a combination of knowledge, abilities, skills, and digital etiquette for using digital technologies by public authorities in the internal and external digital environment of professional life [7].

Table 1

The essence of the concept of "Digital competence"

Authors	Digital competence
Nalyvaiko O. [1]	knowledge and skills to work in a digital environment, the ability to interact and communicate with various entities in cyberspace, the ability to search for and analyze information, the ability to behave responsibly in the process of creating and distributing digital content, knowledge of the operational and technological capabilities of the equipment used for interaction
Sikora Ya., Ivanova S., Kilchenko A. [2]	the ability of an individual, based on the continuous mastery of digital skills, to confidently, effectively, safely, critically, creatively and ethically choose and apply digital technologies in various professional fields of activity, as well as the readiness for such activity
Spirin O., Ovcharuk O. [3]	the ability of an individual to confidently and thoroughly use digital technologies in areas such as professional activity and employment, education, leisure, and social activities, which are vital for participation in daily socio-economic life
Kuibida V., Petrov O., Fedulova L., Androshchuk H. [4]	the set of knowledge, abilities, character traits and behavior patterns that are necessary for a person to be able to use ICT and digital technologies to achieve goals in their personal or professional life
Ferrari A. [5]	a set of knowledge and skills that are necessary to use information technology and digital media to perform tasks; solve problems; manage information; collaborate; communicate; create and distribute content; collaborate and address the issues at hand

Research on this topic has intensified in recent years. Individual issues of the formation of digital competence of public servants have been studied: in the context of the development of a digital society and the emergence of cyber threats – M. Spivak, O. Dubina [8]; in the process of professional training – K. Kopniak, V. Pokynchereda [9]; in the context of a full-scale war in Ukraine – I. Harkavyi, M. Fediunin [10].

The results of the study by N. Novichenko (2023) are noteworthy, where the researcher investigates digital competencies in the field of artificial intelligence (hereinafter referred to as AI): digital planning and design, data use and management, digital governance and administration; and considers the main areas of development of digital knowledge and skills of public servants and AI. The researcher identified and described the traits, skills, and competencies that leaders should possess in the context of the formation of Ukraine as a digital state. The following should be added to the skills and competencies identified by the author: leaders of digitalization processes must have strategic thinking; understanding of the strategic development of Ukraine as a digital state, knowledge of plans for implementing digitalization processes (including the field of public administration) and be the initiator of digital transformations.

Of great importance for the field of public administration and government is the research performed by N. Piskokha "Digital Governance in Local Governments" (2023), where the author: substantiates a set of conceptual provisions for the development of this direction based on AI and databases, systematizes the digital competencies of community officials and highlights the most needed knowledge for their development, including: digital communications, digital infrastructure, e-democracy, cloud services and computing, the Internet of Things and artificial intelligence, digital security.

We share the views of the scientific community that digital competence in the context of digitalization is one of the most important issues in modern society, which is changing the current labor market. In turn, the level of digital competence is becoming a key component of the professional characteristics of employees, which guarantees their competitiveness. Therefore, today's attention to the formation and development of digital competence is caused by the requirements of a digital society, where the constantly developing information and communication technologies serve as a guideline, as well as the growing needs of employers for labor resources who possess digital knowledge and skills.

Purpose. The purpose of the article is to analyze and summarize the theoretical and applied aspects of the development of digital competence of public administrators, investigate the results of the digitalization of the domestic sphere of public administration, argue the need for the development of digital competence in the conditions of the formation of Ukraine as a digital service state and propose directions for its development. The work aims to study the theoretical and applied principles of the development of digital competence of public servants and suggest proposals for their development.

Methods. In the process of research, general scientific methods were used: systematic analysis of publications by scientists and practitioners on the research problem; comparison, generalization – when processing regulatory, strategic and conceptual documents regarding the digitalization of the sphere of public administration, the method of formal analysis when analyzing materials from the UN, EU. A graphical representation of the results of the comparative analysis of the assessment of the development of e-government is formed using the UN interactive knowledge base on e-government UN-EgovKB.

Results and discussion. Today, one of the key development guidelines of Ukraine, as declared in the National Economic Strategy for the period until 2030, is the development of the digital economy as one of the drivers of economic growth of the country with an effective digital service state and compact state institutions. The trajectory of Ukraine's development as a digital state was defined in the Concept of Development of the Digital Economy and Society of Ukraine for 2018–2020. The accelerated digital development program is the

main goal of the Concept, and one of the main areas of digitalization is the development and deepening of citizens' digital competencies.

In March 2021, the government approved the Concept for the Development of Digital Competencies [6], which outlined the path of Ukraine and highlighted priority tasks for the formation and development of digital knowledge and skills among the population, including: ensuring legal regulation for issues of forming state policy on the development of digital competencies, developing amendments to legal acts on the recognition of digital education, developing of citizens; digital competencies and creating indicators for assessing their level.

Starting from 2019, the Ministry of Digital Transformation of Ukraine is responsible for the formation and implementation of state policy in the field of digital development, digitalization, and the development of digital skills of the population. A separate unit has been created within the ministry – the Department of Development of Digital Skills and Digitalization of Education, whose tasks are: 1) implementing state policy based on monitoring the state of the level of citizens' digital skills and digitalization of education; 2) coordination, analysis and assessment of the consequences of implementing state policy, forming conclusions and providing proposals; 3) legislative regulation of the development of digital competence of citizens and digitalization of educational processes.

Special attention should be paid to the laws approved by the government since 2020, namely: "On Electronic Communications" (2020); "On Stimulating the Development of the Digital Economy in Ukraine", "On Public Electronic Registries", "On the Specific Aspects of Providing Public (Electronic Public) Services" (2021); "On Cloud Services", "On the National Informatization Program" (2022); "On Digital Content and Digital Services" (2023). Monitoring of domestic regulatory and legal documents allows us to state the fact that there is an appropriate legislative background for translating the processes of public institutions into a digital format. The presence in Ukraine of effective organizational and legal mechanisms and conceptual and strategic documents is the basis for the formation of a digital service state and the construction of a digital space between participants in communication processes.

The applied implementation of the strategy for building a digital service state is carried out through the implementation in 2020 of the "Diia. State Services Online" – Unified State Web Portal of Electronic Services. This web resource was implemented to provide the public with the access to digital administrative services, on-call management of national information resources, and communications in digital format. The register of services on the Diia platform is constantly increasing, and the existing services are being improved. In accordance with the action plan for the transfer of public services to electronic form by 2026, approved by the Government in 2025, it is planned to digitize services in more than 30 areas with the involvement of 25 state authorities.

Building a digital service state requires appropriate qualifications from providers of administrative services and their users. In order to form and develop digital knowledge and skills of the population, the project "Action. Digital Education" was implemented in Ukraine in 2020. The next stage in the evolution of the project was "Diia. Education" whose current goal is to make a breakthrough in addition to digital knowledge, in general in skills and abilities that are relevant in the modern world. To date, more than 250 educational products have been implemented on the "Diia. Education" national online educational platform including courses for state and public servants, whose development took into account European standards when teaching and assessing digital competence. In order to increase digital competence, for the category of employees of the public sector of management, courses have been introduced on the following topics: "Digitalization of the public sector", "Digital civil servants", "Access to public information", "Digital literacy of civil servants 1.0. based on Google tools", "Regional digital transformation", "Open data advocacy", "Open data for civil servants", "Fundamentals of cyber hygiene", "Making a digital community", "Community 4.0 – creating digital transformation projects", etc. Also, in order to reveal the potential of artificial intelligence, the "ChatGPT course to increase your efficiency" has been created, which offers the basics of project management, procedures for developing and implementing projects in communities – the course "How to create projects in communities". It should be noted that since September 1, 2022, all the "Diia. Education" courses have provided for the accrual of 0.1–0.2 ECTS credits as part of self-education. Representatives of state authorities and local governments can assess their level of digital competence by taking the digital literacy test – "Digital Grammar for Civil Servants" and receive a certificate from the Ministry of Digital Affairs on the level of knowledge (A1, A2 – basic, B1, B2 – intermediate, C1, C2 – advanced). The test tasks of the Digital Grammar for Civil Servants were adapted by Ukrainian experts taking into account European standards.

In addition to the "Diia. Education" national educational platform the National Agency of Ukraine for Civil Service Issues has created the Knowledge Management Portal to organize the professional development of public servants. Professional training of public servants in such a competence as digital literacy is carried out in the following areas: 1) implementation of digitalization tools in local state administrations; 2) state policy of digital development; 3) e-democracy; 4) digital literacy. Today, the portal announces a wide range of general short-term programs to ensure the formation of digital competencies: "On issues of digital literacy", "Basic principles of cyber hygiene", "Protection of personal data", "Digital literacy and information security of public servants", "State policy of digital development", "Digital literacy of public servants", "Application of artificial intelligence algorithms in the activities of public authorities", "Cybersecurity", "Information security and protection of personal data", "Digital literacy of civil servants and local government officials", "Effective communications, interaction and digital trends in public administration", "Digital transformation of the community", etc. The implementation of training programs is carried out by regional centers for advanced training with the participation of the Higher School of Public Administration, the Academy of Professional Development and higher education establishments.

In Ukraine, the "CDTO Campus" national educational project is being implemented in stages, which trains Chief Digital Transformation Officers (CDTO) and digitalization specialists for executive bodies and local governments (public servants). The innovative educational platform "CDTO Campus" [11] was created in Ukraine for professionals interested in state digitalization and trains digital transformation leaders for the national, regional and local levels. The training process uses such approaches as: practice-oriented methodology, group interaction, world practice and hybrid learning format. The "CDTO Campus" web resource has implemented long-term programs for digital leaders on innovative development in the public sector of management: 1) "Digital Transformation in Public Governance" – the program was developed taking into account domestic practice and world experience of digitalization; 2) "Creating a Digital Future" – focused on digital transformation managers in ministries and departments and created for their personal development as leaders of Ukraine's digitalization processes.

In addition to long-term training programs, the platform also implements short-term ones designed for existing CDTOs and individuals involved in digital transformation processes in the public sector, which provide a theoretical basis and practical tools to improve the efficiency of management activities. The list of courses includes: "AI HOUSE: Fundamentals of Artificial Intelligence", "EU4DigitalUA: Personal Data Protection", OSCE: Formation and Implementation of Open Data Policy", "Cisco: Implementation of Secure Digital Platforms", "UNDP: Leadership Program for Women Involved in the Digitalization of Public Services". Also, the web portal announced a service for developing a personalized corporate training program for organizations. Training under CDTO Campus programs is primarily designed for individuals who are participants in digitalization processes; aimed at increasing their digital awareness, expanding their network of contacts, mastering management strategies, the ability to anticipate challenges, and using best world practices.

At the initiative of the Ministry of Digital Transformation of Ukraine, a study of citizens' digital skills was conducted in 2019 (for the first time), the next ones took place in 2 years: in 2021 and in 2023. During the study period, it was found that the digital skills indicator in 2023 increased by 12.6 % compared to 2019; according to recent studies: 59.6 % of Ukrainians have digital literacy at least at the basic level, 72 % of citizens use the Internet for learning and development, 31 % of the adult population uses artificial intelligence, about 60 percent (58.3 %) of Ukrainians aged 18–70 are interested in developing digital skills [12]. The existing positive dynamics of characteristic indicators for the studied period indicates an increase in the level of digital competence of Ukrainians.

The rapid development of Ukraine as a digital state, its economy and industries, including the field of public governance and administration, ensured an improvement in the country's positions in world rankings. A characteristic indicator of digital transformations in the public sector of governance is The UN Global E-Government Development Index (EGDI), a study of which is conducted once every two years by the UN Department of Economic and Social Affairs. When calculating the EGDI, three sub-indices are taken into account: Online Service Index (OSI), Telecommunication Infrastructure Index (TII) and Human Capital Index (HCI).

The UN e-government review, published in 2024, [13] provides a comprehensive assessment of e-government in 193 member states and shows a significant upward trend in the development of digital government worldwide and a significant improvement in the global average EGDI. The leaders of the 2024 ranking are Denmark, Estonia, Singapore, the Republic of Korea, Iceland, Saudi Arabia, the United Kingdom of Great Britain and Northern Ireland, Australia, Finland, and the Netherlands. Among the post-Soviet countries, Estonia should be singled out separately, which in recent years has been among the top ten world leaders in terms of EGDI, and in the 2024 ranking it took 2^{nd} place after Denmark. As for the regional development of e-government, among the 76 countries in the very high EGDI group, 36 are in Europe, 25 in Asia, 11 in the Americas, 2 in Africa, and 2 in Oceania.

Ukraine significantly improved the EGDI index in 2024 compared to 2022 – from 0.8029 to 0.8841 and its sub-indices, namely OSI – from 0.8148 to 0.9854, TII – from 0.7270 to 0.8428, HCI – from 0.8669 to 0.8240.

Monitoring the development of e-government in Ukraine over the past years: 2012–2024 (Table 2) showed: positive dynamics of the EGDI index in 2012 (+0.05) [14] and 2016 (+0.11) [15] and a stable improvement in the ranking position starting from 2020 [16] to the present; a decrease in the index was observed in 2014 – by 0.06 [17]. The rapid growth in the world ranking should be noted separately: in 2018 – 82^{nd} place [18], in 2020 – 69^{th} and in 2024 – 30^{th} place. In 2022, Ukraine first entered the group with a very high EGDI index = 0.8029 and surpassed the post-Soviet countries, except for the Baltic countries and Kazakhstan [19]. It is

Table 2

Dynamics of e-government development in Ukraine 2012 –2024 pp. [13–19]

	Indicators	Years						
		2024	2022	2020	2018	2016	2014	2012
1	E-Government Development Index	0.8841	0.8029	0.7119	0.6165	0.6076	0.5032	0.5653
1.1	Online Service Index	0.9854	0.8148	0.6824	0.5694	0.5870	0.2677	0.4248
1.2	Telecommunication Infrastructure Index	0.8428	0.7270	0.5942	0.4364	0.3968	0.3802	0.3535
1.3	Human Capital Index	0.8240	0.8669	0.8591	0.8436	0.8390	0.8616	0.9176
	Ranking	30	46	69	82	62	87	68

noteworthy that during this period there was an increase in the average world value of EGDI to 0.6102 from 0.5988 in the comparable 2020.

The graphical representation of the results of the comparative analysis (Figure), which provides a comparative assessment of the development of e-government in the UN Member States, is formed using the UN Interactive Knowledge Base on e-government (UN EgovKB). The database is created by the Division of Public Institutions and Digital Government of the UN Department of Economic and Social Affairs for the use of information in research, goal planning, and training.

In the publication of the results of the UN research in 2024, Ukraine's EGDI (0.8841) is higher than the average rating and the average regional rating. The regional and world leader is Denmark (EGDI = 0.9847). Ukraine is thirtieth in the e-government rating, which is 16 positions higher than in 2022.

As an additional index to the EGDI, E-Participation Index (EPI), within which government platforms and information communications of the population with them are assessed. During the period of Ukraine's participation in the ranking (2003–2024), the country is characterized by fluctuations in the EPI index. In 2024, Ukraine took *1st* place among 193 countries in the world, having risen by 56 positions compared to the 2022 index. The leaders of this ranking include such countries as: Denmark (0.9863), Japan (0.9863), the United Kingdom of Great Britain and Northern Ireland (0.9726), Estonia (0.9589), Singapore (0.9589), and Saudi Arabia (0.9589).

In addition to the above-mentioned achievements in the field of digitalization of domestic public authorities, Ukraine's third place in the rating of the level of development of open data in Europe (Open Data Maturity – ODM) should be added. The assessment of this area takes into account more than 165 indicators, which are grouped into four groups: open data policy, the work of the national portal, the impact of open data on key areas of life, and the quality of published data. The purpose of this rating is to assess the maturity of countries in the field of open data, the provision of public resources and the reuse of public sector information. The ODM ranking includes 35 European countries (27 – EU, 3 – European Free Trade Association: Iceland, Norway, Switzerland, 5 – candidates: Bosnia and Herzegovina, Montenegro, Albania, Serbia, Ukraine (joined in 2020).

Countries across Europe continue to improve their ODM on average. The average score for all participating countries increased by 4 percentage points – from 79 % in 2022 to 83 % in 2023, in 2024 the open data maturity indicator remained at the previous year's level – 83 %. The top three remain France (98.3 %), Poland (97.9 %) and Ukraine (96.3 %), while Poland rose from third to second place in 2023. The most improved indicators in the countries: Slovakia, Latvia, Iceland, Serbia and Montenegro.

Ukraine has been participating in this ranking since 2020 and was ranked *17th*, with the overall open data maturity index exceeding the European average. The improvement in positions was observed in subsequent years and in 2022 Ukraine was second in the open data ranking, and in 2023 – a slight decrease by 1 position due to Russian military aggression (Table 3). The level of open data maturity in Ukraine in 2024 is 97 % and it is among the leaders of the Top 3 countries with the highest indicators (96–98 %), while the average European indicator is 83 %.

There is progress in the openness of public information resources and the stimulation of their reuse in Eu-

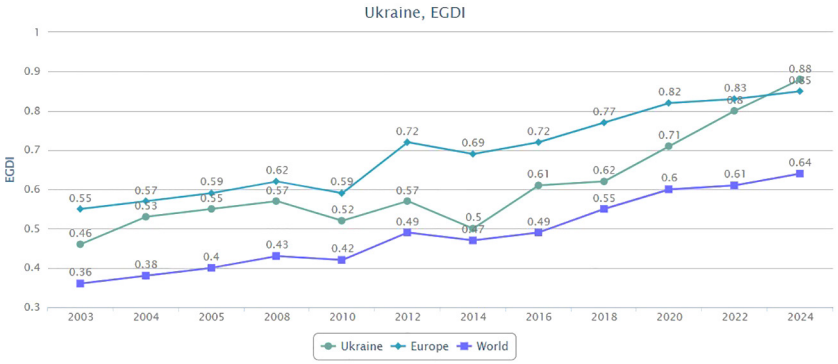

Fig. Evolutionary development of e-government in Ukraine 2003–2024 [20]

Table 3

Dynamics of the open data maturity index in Ukraine 2020–2024 [21]

Years	Ranking	Average indicator for Europe	Total indicator for Ukraine	Indicator groups			
				Policy	Portal	Impact	Quality
2020	17	78	84	85	88	85	94
2021	6	81	94	98	94	95	94
2022	2	79	97	100	95	100	93
2023	3	83	96	98	93	100	89
2024	3	83	97	100	94	100	78

ropean countries. Ukraine is actively participating in the global trends of open data development, and thanks to its achievements, it successfully communicates in the field of open data at the international level. Such significant progress of Ukraine in digitalization would not have been possible without the proactive work of the Ministry of Digital Transformation of Ukraine and the sustained support of international partners.

The strategic guideline for the development of the public administration sector is the 11 Principles of Good Governance for Sustainable Development, which were developed by the UN Committee of Experts on Public Administration and approved in July 2018 by the UN Economic and Social Council. The application of these principles to state institutions can accelerate efforts to strengthen the capacity of national and local governance, help create effective, accountable and inclusive institutions at all levels in order to achieve the 2030 Agenda and other international agreements. The principles are described in groups: 1) effectiveness (competence, smart public policy, cooperation); 2) accountability (good faith, transparency, independent control); 3) inclusiveness (no one should be forgotten, non-discrimination, participation, subsidiarity, equality between generations) [22]. Among the 11 principles of effective governance, UN experts singled out the first one – competence. The Working Group on Public Sector Staffing of the Committee of Experts on Public Administration (CEPA) determines that it is necessary to promote the professional level of public administrators, invest in their digital skills, and update the competence framework to build sustainable institutions that are focused on the needs of people.

The priority area of development of the EU and Ukraine today is digital services and digital markets. The EU Digital Services Act [23], a set of EU rules governing online platforms and intermediaries, will enter into force on 17 February 2024. The key values of the law are to create an open, safe, accountable and fair online platform environment, with the citizen at its core, in line with European values. It should be noted that the new EU rules will have to be complied with by all online service providers operating in the EU market, regardless of whether they are located in the EU or outside it. In recent years, the issue of digital skills has been high on the European policy agenda.

The need for developing and improving digital skills and competences in the context of digital transformations is receiving increased attention in EU countries and, as noted above, since 2006, digital competence has been included in the list of key competences; in 2013, the first European Digital Competence Framework for Citizens (abbreviated name – DigComp) was developed, which was gradually improved: DigComp 1.0, DigComp 2.0, DigComp 2.1, DigComp 2.2 – in 2022. Regarding the latest version of DigComp 2.2 [24], changes were made to the relevant knowledge and skills, taking into account new requirements for digital competence for citizens arising from new developments in the digital world (systems controlled by artificial intelligence, robotics, the Internet of Things, as well as new phenomena – disinformation). This update takes into account the knowledge, skills and attitudes that citizens need in the face of change and is: 1) a pan-European tool for improving citizens' digital competence; 2) a reference point for shaping digital development policies; 3) a relevant document for planning educational and training initiatives.

In order to adapt the education and training systems of the Member States to the digital age, the Digital Education Action Plan (2021–2027) [25] was adopted on 30 September 2020 at the initiative of the EU, which identifies the following strategic directions: 1) development of a highly effective digital education ecosystem; 2) improvement of digital skills and competences for digital transformation. To promote the development of priority areas, cooperation and exchange on digital education at the EU level, the European Centre for Digital Education has been established.

To form a state policy for the development of citizens' digital competences and plan educational initiatives, domestic experts adapted the DigComp 2.1 European model as conceptual reference and in 2021 published the Description of the Digital Competence Framework for Citizens of Ukraine; in 2023, its updated version [26] was presented, taking into account the DigComp 2.2:1 version. In addition, Ukraine has digital competence frameworks: pedagogical and scientific-pedagogical workers, entrepreneurs, librarians, healthcare workers, entrepreneurial competence of youth in Ukraine, civil servants (draft).

The draft Digital Competence Framework for Civil Servants of Ukraine was published in 2021, which presents the following areas of competence: computer and information literacy; digital communication, interaction and collaboration; work with digital content; security in the digital environment and implementation of digitalization policy at all levels: state, organizational, and personal [27]. The Framework Conceptual approaches are recommended for use by officials who form state policy, as well as: 1) for developing professional standards; 2) for creating and revising educational programs in order to train specialists in Specialty "281 Public Management and Administration"; 3) for planning advanced training measures for public servants and forming individual programs for their professional development; 4) when developing job descriptions.

In the context of existing cyber threats, ensuring the security of the internal infrastructure of automated systems, and leakage of classified information, it becomes obvious that, in addition to increasing the level of digital competencies, it is necessary to pay attention to the formation of an appropriate culture and cyber hygiene – digital etiquette of public servants. The proposed spectrum of competencies of a public servant in the field of "Digital Etiquette" is highlighted in the author's publication [7].

The effectiveness of digital transformations and the efficiency of digitalization of the activities of public institutions are primarily ensured by the professional development of digital knowledge and skills of public servants. The fundamental basis for the formation of the human resource potential of the public service should be practice-oriented training by higher education establishments of specialists with an appropriate level of digital competence. Based on the results of monitoring the industry standards of higher education in Specialty 28 "Public Management and Administration", Specialty

"281 Public Management and Administration" at the bachelor's and master's levels, in order to form professional digital competence in graduates, it is proposed to introduce changes to the current standards in the "List of Competencies of Applicants" section including knowledge, skills, and abilities that are inherent in the formation of digital competence. Proposals for higher education standards on the formation of digital competencies relate to general and specific competencies of the list of applicants' competencies [7]. In the event of the adoption of the Digital Competence Framework for Civil Servants of Ukraine (currently a draft), it is necessary to take into account the descriptors of the Framework when forming the list of applicants' competencies in the above-mentioned higher education standards. Corresponding changes in the standards will be reflected in educational programs by field of training. The implementation of a practice-oriented approach to the educational process, the ability of applicants to use modern web platforms and digital tools of the public administration sphere is ensured by involving experts and practitioners in the industry; in addition, the prospect for universities is a gradual transition to a dual form of education.

In addition to the above, in order to further develop the digital competence of public authorities' personnel, it is necessary to: 1) include professional digital skills in the mandatory job descriptions for employees of public authorities; 2) use in the programs of advanced training and training of civil servants profile programs for the development of digital competence, which are implemented on the "Diia. Education" national online platform for digital literacy, innovations and prospects for further development.

Conclusions. A digital service state with a wide range of digital services is gradually emerging In Ukraine. Modern digital transformations in society and the economy require communicative digital competence of the population thus making it a present day topical issue. Today, the issue of the formation and development of digital competence among specialists in the field of public administration deserves special attention, taking into account the rapid processes of digitalization of the industry. Theoretical issues of digital competences still remain on the periphery of research by domestic scientists. The conducted study of the applied aspect of this direction shows the presence of an organizational and legal basis in Ukraine, declared development prospects in strategic and conceptual documents, the presence of state digital platforms (administrative services and online learning), improvement in Ukraine's characteristic indicators in world rankings. Today, the development of digital services and digital markets is a strategic guideline for the development of the public sector of EU countries with digital skills occupying the first place on the agenda of European policy. The article gives an insight into the list of competencies of a public servant supplemented with "Digital Etiquette"; amendment of the higher education standard in the Specialty 281 "Public Management and Administration" in terms of general and special competencies regarding the applicants' formation of digital competencies.

Prospects for further development of the research are underpinned by the study of best practices in human capital development in the leading countries of the world ranking according to the e-Government Development Index 2024: Denmark, Estonia, Singapore, and Republic of Korea.

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Цифрова компетентність публічних службовців у контексті становлення цифрової сервісної держави

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Мета. Узагальнення теоретичної та прикладної площини розвитку цифрової компетентності публічних службовців у процесі побудови цифрової сервісної держави, дослідження результатів процесів цифровізації вітчизняної сфери публічного управління, обґрунтування необхідності формування цифрової компетенції й визначення шляхів її розвитку.

Методика. У дослідженні використовується загальнонаукова методологія: аналіз, систематизація, синтез, порівняння, узагальнення.

Результати. За результатом проведеного дослідження встановлено: 1) низку схвалених урядом концептуально-стратегічних документів, у яких цифровізацію визнано як один із пріоритетних напрямів розвитку країни; 2) наявні організаційно-правові засади для успішної реалізації планів побудови цифрової держави; 3) реалізовані й продовжують упроваджуватись проєкти зі створення публічних цифрових платформ і інструментів; 4) спектр навчальних курсів для публічних службовців на онлайн-платформі «Дія. Освіта» й інших навчальних порталах, національний освітній проєкт «CDTO Campus»; 5) позитивну динаміку показників цифрової грамотності населення починаючи із 2019 р.; 6) шість Рамок цифрової компетентності для різних верст населення й проєкт для держслужбовців; 7) значне покращення позицій України у світових рейтингах: EGDI 2024 – 30 місце (+16) та EPI 2024 –1 місце (+57) серед 193 країн, ODM 2024 – 3 місце (–1) серед 35 європейських країн-учасниць. Проаналізовані європейські стратегічні орієнтири розвитку публічного сектору: пріоритетний напрям – цифрові послуги й цифрові ринки; перше місце в порядку денному європейської політики займають цифрові навички.

Наукова новизна. Науковий результат полягає в: обґрунтуванні й визначенні складової цифрової компетентності – цифровий етикет публічного службовця; рекомендації включення професійних цифрових навичок до обов'язкових кваліфікаційних вимог для фахівців органів публічної влади; використанні у програмах підвищення кваліфікації й підготовки державних службовців профільних програм із розвитку цифрової компетентності платформи «Дія. Освіта»; пропозиції щодо внесення змін у стандарти вищої освіти бакалаврського й магістерського рівнів спеціальність «281 Публічне управління та адміністрування» щодо переліку компетентностей випускника – включити знання, уміння, навички, що властиві формуванню цифрової компетентності випускника.

Практична значимість. Визначена у прикладних пропозиціях формування цифрової компентності публічних службовців.

Ключові слова: *цифрова компетентність, публічні службовці, цифрова сервісна держава, цифровізація*

The manuscript was submitted 03.12.24.