MODEL OF DIGITAL COMPETENCIES OF CIVIL SERVANTS IN THE REPUBLIC OF BELARUS

Dr IRINA SIDORCHUK

Ph.D in law, associate professor, Deputy Director for scientific and methodological work, Institute of Information Technologies, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

irina_sidorchuk@bsuir.by

Dr ALEXEY OHRIMENKO

Ph.D in technical sciences, associate professor, Director, Institute of Information Technologies, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

ohrimenko@bsuir.by

EKATERINA TULEJKO

Master of management, research associate, Laboratory of public administration research, Academy of Management under the President of the Republic of Belarus, Minsk, Belarus

e_tulejko@mail.ru

Abstract

The formation of the digital economy in the Republic of Belarus as one of the country's development priorities has a significant impact on the activities of civil servants. Modern socio-economic conditions, external challenges and threats, and the rapid development of information and communication technologies require civil servants to respond flexibly to changes. The article presents trends in the impact of the digital economy on the professional activities of civil servants, as well as the author's approach to the formation of a model of digital competencies of civil servants.

Key words: local government and self-government, local e-government, public services, digital technologies, e-democracy.

The concept of «digital transformation», which is understood as display of qualitative, revolutionary changes that consist not only in individual digital transformations, but also in a fundamental changes in the structure of the economy, in the transfer of value-added centers to the sphere of building digital resources and end-to-end digital processes. As a result of digital transformation, there is a transition to a new technological and economic structure, as well as the creation of new sectors of the economy [2].

The subjects of digital transformation are citizens, government agencies and organizations, and businesses. The state, as the main subject of management and socio-economic policy, must respond to changes in a timely manner, assess the consequences and anticipate the pillars of development and expectations of society.

It is assumed that the digital transformation of public administration covers not only individual functions of a state body (organization), but also the entire management cycle (planning, forecasting, processing, controlling and decision-making).

The impact of the digital transformation of public administration on the activities of civil servants is shown in Figure 1.
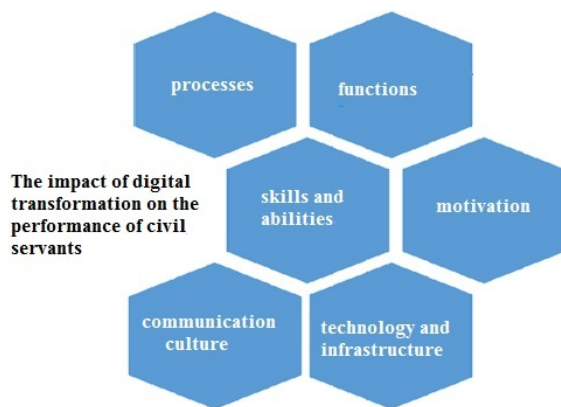
Figure 1. The impact of digital transformation on the performance of civil servants [own elaboration].

Thus, according to figure 1, digital transformation has an impact on the activities of civil servants in the following areas:

1. Changing the processes of civil servants activities, which involves: increasing the use of «big data» for the purposes of developing public policy, generating official statistics, etc.; automating routine procedures and electronic interaction with all subjects; getting rid of duplicate processes in order to increase the efficiency and speed of interaction;

2. The transformation of the management cycle based on: the provision of public services by default (without complaint); change of technologies, quality planning and management decision-making (based on valid and reliable data and algorithms, including artificial intelligence; changing approaches to assessing the performance of civil servants (based on the use of predictive analytics, random controlled trials, other analytical methods based on artificial intelligence technology; improvement of human resources related to changing the role of human resources services (transition from HR departments to HR management services – HR manager), introduction of modern methods of personnel management in the activities of human resources services of state bodies and organizations (Assessment center, KPI, HR analytics).

3. Changing the culture of interaction associated with the spread of the culture of «flexible management» (Agile approach), which is an iterative process of implementing activities with the constant use of feedback mechanisms and adjusting the actions of project participants to feedback [3, p. 11]. In addition, the transformation of public administration requires not only new technologies, but also a completely different culture and level of management, the development of project and process management in the public service, as well

as a culture of interaction with subjects through the use of the Internet.

4. The development of infrastructure and technology. Digital transformation increases the requirements for the level of technological infrastructure in public administration, which is necessary for the sustainable support of information systems. Under these conditions, the civil servant needs to learn how to work, constantly adapt to changes, and promote the development of information systems in the workplace.

5. Continuous professional development of civil servants associated with the need to acquire new skills and abilities in modern conditions. Digital transformation of public administration implies that civil servants have new competencies that must be continuously developed in the context of the formation of the digital economy and dynamically changing technologies.

6. Changing the system of motivation of civil servants, based on the dynamic value orientations of society in the context of digital transformation (blurring the boundaries between work and personal life, flexible working hours, focus on results, not working hours).

Thus, information and technological transformations, the increased role of information and communication technologies (hereinafter-ICT) in the activities of public servants pose the task of training qualified personnel. However, the lack of developed methods for identifying the structure of digital competencies raises the problem of finding relevant and in-demand competencies for effective work of civil servants in the context of digital transformation.

Analysis of foreign approaches to the formation of digital competence models allows combining them into 4 blocks (Appendixes – Table 1).

Based on the approaches presented above, other studies, as well as regulatory legal acts of the Republic of Belarus, we will draw the Model of digital competencies of civil servants (hereinafter referred to as the digital competencies Model) (Fig. 2).

As shown in Figure 2, the digital competence model includes managerial, communication, and technical competencies, which are distributed according to the category of civil service positions and the qualification requirements for civil servants.
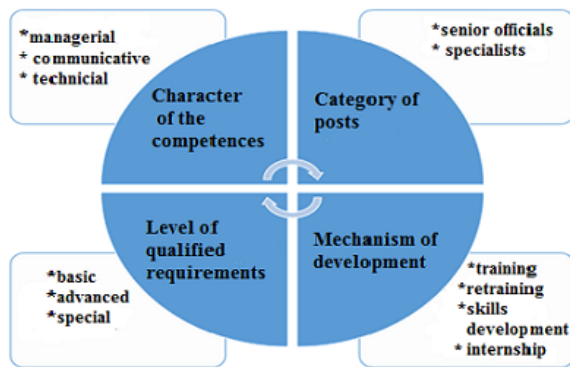
Figure 2. **Model of digital competencies of civil servants in the Republic of Belarus [own development]**

Thus, the team of authors identified the following types of digital competencies of civil servants:

- managerial competencies are a set of knowledge, skills and personal characteristics of a civil servant that allow them to effectively perform their professional activities in the context of digital transformation. Managerial competencies include cognitive and socio-behavioral skills, including: intellectual, business, leadership, moral qualities, as well as organizational skills of a civil servant (work planning based on ICT; coordination of employee's activities through special software, etc.);
- technical competencies – professional knowledge, experience, and skills in the field of ICT that determine the effectiveness and efficiency of the professional activity of a civil servant (ability to work with various technical devices, files, online services, and applications; adaptation of professional activity to the organizations information systems, etc.);
- communication competencies – the ability to apply professional knowledge, skills and abilities to work with information, while ensuring effective interaction (communication), including using ICT (the ability to work in interdisciplinary groups and teams).

In accordance with the digital competence model, the above-mentioned competencies are systematized according to the levels of qualification requirements: basic, advanced, and special.

The basic level of qualification requirements in the field of digital technologies is a general list of professional knowledge and skills of a civil servant in the use of technical and software tools necessary for the performance of official duties in the context of digital transformation.

The advanced level of qualification requirements in the field of digital technologies is a list of professional knowledge and skills in the use of technical and software tools necessary for solving managerial tasks in the context of digital transformation.

Special quality demands in the field of digital technologies are a list of additional (to basic or expanded levels) professional knowledge and skills in ICT, which must have government employees in charge of ICT in the activities of state bodies and organizations.

Thus, the «Manager» category also requires an extended level of qualification requirements. A special level of qualification requirements is imposed on officials who are responsible for the implementation of ICT in the activities of relevant state bodies and organizations.

By forming the trajectory of professional development of a civil servant, the competencies related to different levels are distributed by the personnel service of the state body and organization, depending on the category of the civil servant (Manager, specialist) and his / her functional responsibilities. The balance of managerial, communicative and technical competencies, as well as communicative, cultural and psychophysiological personality traits of a civil servant is taken into account.

An important element in the model of digital competencies is the mechanism for developing competencies as a condition for improving the effectiveness of professional activities in the context of digital transformation of public administration. The main direction of development of communicative competences of civil servants is continuous education, including: training and retraining; professional development and internship (short-term seminars); self-education.

Thus, for a civil servant, the list of digital competencies is an understanding of the trajectory of professional development. For a government agency or organization, it is possible to evaluate specific digital competencies in relation to a civil servant (taking into account the category and qualification requirements). For the public administration system, the digital competence model is a step towards digital transformation.

References

1. Digital skills training: global challenges and best practices. Analytical report.–Moscow: ANO DPO «Sberbank Corporate University», 2018. –136 p.
2. State as a platform: people and technologies [Electronic resource] / ed. Shklyaruk M. S.-M.: Ranepa, 2019. - access mode: https://www.ranepa.ru/images/News/2019-01/16-01-2019-GovPlatform.pdf. - access date: 23.06.2020.
3. Digital future of public administration by results / E. I. Dobrolyubova [et al.]. - Moscow: publishing house «Delo», 2019 – 114 p.
4. Ermak, A. S. ICT competencies in public administration: challenges of the present / A. S. Ermak, E. A. Kutergina // Internet and modern society: proceedings of the XXI international scientific conf., Saint Petersburg, June 21-23, 2017: abstract digest. –SPb, 2018. – Pp. 81-84.

Appendixes

Table 1

Foreign approaches to the formation of digital competence models [1, 4]

№	Name of the approach	Content of the approach
1	European model of digital competencies for education	Digital skills are divided into user skills (the ability to work with various technical devices, files, the Internet; skills for working in online applications, digital services, etc.) and specialized skills (skills that are the basis of high-tech professions).
2	Model of digital competence for citizens	It includes 5 areas (information literacy, communication and collaboration, digital content creation, security, problem solving) and 21 digital competencies needed by all citizens. The classification is applied in 21 EU countries (France, Italy, great Britain, Poland, etc.)
3	Target competency model 2025	Digital skills are considered as technical knowledge in the field of ICT, in close connection with «soft skills» and general knowledge. This model highlights cognitive, social-behavioral, and digital skills.
4	Digital competencies of civil servants	Digital competencies: organizational (Soft Skills) and technological (Hard Skills). Organizational: ability to design and plan roadmaps for programs and projects; ability to organize projects and programs, manage changes, etc. Technological competencies are associated with obtaining knowledge and skills in the field of development and operation of information systems, depending on the practical activity of a civil servant: the ability to work with the architecture of information systems, the ability to model and manage the development and testing of information systems, build software monitoring system, etc. [3, p. 71-73].