Information & Analytical Support of Civil Servants Professional Competencies Monitoring Studies

Eduard Afonin [1†]**, Olga Balakireva** [2††]**, Vitaliy Omelyanenko** [3†††]**, Ilona Klymenko** [1†]**, Iryna Korchak** [1†]

[1†] Department of Public Policy of the Educational and Scientific Institute of Public Administration and Civil Service, Taras Shevchenko National University of Kyiv, Ukraine
[2††] Department for Monitoring Research of Social and Economic Transformations of the Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine, Ukraine
[3†††] Institute of Industrial Economics of NAS of Ukraine, Ukraine; Sumy State Pedagogical University, Ukraine; Institute of Innovation Development Strategies and Knowledge Transfer, Ukraine

Summary

The article contains arguments on the need to develop information & analytical support tools for assessing change, analysis of successes, problems, barriers that arise in the process of public administration reform. Authors consider invariants of professional competencies of civil servants. The authors argue that comprehensive information support for reforms should be based on the principles of sociological monitoring and should consist of the formation of targets, have a baseline assessment, regular monitoring surveys, dynamic analysis. The methodology used in the study can be a valuable tool for sociological and psychological research of civil servants, taking into account its advantages and at the same time the inherent limitations of any methodology.

Keywords: civil servants, information culture, ICT.

1. Introduction

Progressive changes in the XXI century. have become so fast that it is simply impossible to take them into account in the process of preparation: during the development of technology or a certain production process it becomes irrelevant, so the employee has to learn in the process of learning, not work. The specificity of the profession of civil servant is the constant need to learn and improve. This invariant component of professional training will allow to master the additional competencies required for a specific position and maintain their relevance. One of the basic invariant (goal) competencies should be the ability to develop abilities (the ability to learn and acquire new knowledge and experience), which includes skills of self-organization, the ability to learn new experiences (and resist resistance), the ability to learn and more.

New factors of socio-economic processes make relevant issues of analytical support of public administration [1-4]. In the previous researches of the authors the current trends of social transformations are considered [5-9], which should also be taken into account in the work of civil servants.

The purpose of this study is to determine the framework of information and analytical support for the processes of professional identification of civil servants.

2. Information & Analytical Base of Professional Competencies of Civil Servants

We point out such invariants of professional competencies of civil servants. Change management and project activities are the ability to plan activities, manage and evaluate the effectiveness of change. A civil servant carries out professional activities in conditions of constant socio-cultural and state transformation. A civil servant must independently initiate changes, be ready to go beyond comfort and organize transformational activities within the structural units that he heads or within which he carries out professional activities. In the system of public relations, a civil servant is at the forefront of change and is a person who is perceived by the public as their initiator and executor. Mastering this competence involves the ability to plan activities and set strategic goals.

The main purpose of the professional activity of a civil servant is to ensure the implementation of state functions and the implementation of service mediation between the state and ordinary citizens. Management of state change involves changes in the functions of the state in order to ensure the common good. Strategic management is a process of organizing activities in order to achieve long-term goals that ensure the stable functioning of the state as a social institution and provides the most comfortable living conditions for ordinary citizens.

The organization of purposeful activity involves effective decision-making and redistribution of power. A civil servant uses functional means of activity for the purpose of management. Management decisions are made on the basis of the official's understanding of the ultimate

goals of the activity, the strategic goals of the organization and its own limits of competence. It also implies taking responsibility for the results not only of one's own professional activity, but also of the group as a whole. A civil servant must carefully assess the potential resources (material, time, human) that he has and focus on the most realistic plan to achieve goals.

Working in difficult conditions or in situations of uncertainty requires that the civil servant has operational flexibility and be ready to change the algorithm of activity or can focus on non-standard innovative way of performing activities, which will force some reorganization of group activities and empower members. At each stage of group performance there should be an analytical assessment of the effectiveness of its implementation and the problematic aspects that may further affect the overall results of the team and the quality of the result.

In order to effectively organize group activities, a civil servant must have certain personal characteristics that will promote the active involvement of the team in joint activities. Leadership qualities (public activity) of a civil servant will determine the degree of trust of his subordinates and potential customers of public services. Equally important is the ability of civil servants to form the motivational potential of the team, to monitor the socio-psychological climate of the team, to maintain a productive interest in work and work results. The motivational potential of the activity depends on the extent to which the activity performed by the employee meets his current and potential needs. The group leader must constantly find ways to develop not only external motivation, which is mainly related to the achievement of utilitarian goals, but also to develop organizational culture in the direction of finding internal activators of activity.

One of the most important professional competencies of a civil servant is the ability to communicate and establish interaction with other subjects of state relations and ordinary citizens as consumers of public services. A civil servant must have effective methods of establishing communication and organizing social interaction, methods of overcoming conflict situations. He must have an impartial attitude towards all members of the social environment, developed business traits that will allow communication with socially isolated groups. The development of this competence also involves the ability to interact with potential stakeholders, change agents, NGOs, and other state legislative and executive bodies. In order to achieve the ultimate goal of the task, a civil servant must be able to form a team of performers not only from among subordinates, but also from other persons, which provides effective motivation to participate in the project. A civil servant must be able to interact with the

media; to present information correctly on social networks, to participate in public events and to present one's own opinion during public speeches, interviews, expert assessment, interaction with public service customers. This implies a high level of language training and impeccable command of the state language and the official languages of the European Union, which are part of the language competence diagnosed in the examination environment.

The professional activity of a civil servant in the information society involves the professional ability to process large amounts of information, navigate in the information space, be able to manage information flows. A civil servant must be oriented in the legal field of state activity, know the Ukrainian legislation within the competence of professional activity. The ability to work with information is one of the key competencies of employees in the human-social system. Most of the tasks performed by a civil servant are searchable, for their successful implementation it is necessary to be able to quickly find relevant information. The development of this competence involves the ability to work with databases, analyze information, verify information.

Social virtualization in the information society is a phenomenon that can be defined as one of the norms of personal life. The interaction between the various actors in public and state relations is mediated by the digital network and the services it provides. To ensure access to information and at the same time for its effective collection, the state creates a whole system of e-government, which helps to establish communication between the person (group) and government institutions. Electronic services that mediate the links between social actors and public authorities have proven to be convenient and effective to use.

A civil servant must be able to use e-government services, provide public services in the virtual information space and use modern computer technology and telecommunications.

3. ICT Component of Professional Competencies of Civil Servants

The challenges of the information society have also led to the need to use ICT in professional activities. They allow you to receive new information and communicate more effectively in the social environment through digital and telecommunications. This invariant competence is related to the ability of the subject to use digital technologies in professional activities, a positive attitude to their involvement in everyday activities and the ability to organize the production process, taking into account the possibility of attracting the latest digital technologies.

The result of informatization and increasing the social value of information was the emergence of a new type of relationship between members of society in a local or global context, which is mediated by a common information field (Bell, Bellamy, Inozemtsev). The virtualization of social processes under the influence of scientific and technological progress has led to the emergence of a new type of relationship based on the possibility of access to the global telecommunications network.

Social virtualization in the information society is a phenomenon that can be defined as one of the norms of a person's life in it. Some manifestations of social activity have partially or completely passed into the virtual dimension, and some of the processes of social life require a «certain representation» of their person in the virtual network. The interaction between the various actors in public and state relations is mediated by the digital network and the services it provides. To ensure access to information and at the same time for its effective collection, the state creates a whole system of e-government, which helps to establish communication between the person (group) and government institutions.

The government is a stakeholder in the partial virtualization of the individual in the digital network space. This is due to the fact that most state processes have long taken place in both the physical and virtual planes, so the lack of identity in it can lead to loss of state control over ordinary citizens. The virtualization of public administration processes has reduced the psychological distance between ordinary citizens and public entities and their representatives. Virtual counterparts of politicians, statesmen and public figures, public figures are much closer to the average person than physical counterparts. In the online environment, you can communicate with them (for example, many politicians have an electronic public reception), to form a range of issues for discussion. The state has constant feedback from the public (assessment of the attitude of citizens to the activities of the state).

As a mediator between the state and the average citizen (citizens), a civil servant is obliged to carry out his / her professional activity both in the physical space of the state and its social institutions, and in the virtual one. They are required to be able to establish communication on a local and transcultural scale, analyze and process large amounts of information, search for information and verify it. At the World Economic Forum in Davos in 2016, much attention was paid to issues of modern education and its relevance not only at the time of preparation, but also in the future. The key skills that future employees of most professions should have are: critical thinking, creativity, judgment and decision-making, cognitive flexibility. The digital revolution was a turning point in the labor market.

Most of the technological processes of production have been transferred to the virtual plane, so the world of professions familiar to industrial society will soon cease to function, and new types of employment will appear, which will be associated with processing information flows and servicing their circulation.

The development of information culture in most countries of the European Union belongs to the soft skills that help the subject of social relations to effectively adapt to the socio-professional environment. The culture of the information society, to which the transition took place in most countries at the initiative of the state, required a certain level of culture, its ability to carry out professional and other social activities in a virtual digital environment or use ICT and relevant knowledge to solve current problems. The evolution of the way the individual interacts with the information space occurs as a result of changing the role and importance of knowledge in human life. Although it has always been decisive in the process of establishing any individual or collective activity, today this process is not shrouded in a static monoflow of information, which previously had long cycles of renewal, but involves the intersection of many information systems in various subcontracting relationships. . If in the early twentieth century. it was believed that knowledge (information) rules the world, then in the XXI century. - that knowledge generates worlds. The ability to master information, knowledge and, last but not least, to operate them (critical analysis, restructuring, integration and implementation) are becoming the basic social characteristics of modern man, living in a globalized digital information society.

Socio-cultural changes brought about by inventions in the field of information technology are related to changes in the value of information in society and the individual. All types of socio-cultural activities are associated with the constant need to assimilate information in the form of knowledge and social experience. From the beginning of human civilization, knowledge has played a significant role, but their assimilation was given a certain period of socio-age development. This was due to the fact that the system of social knowledge had a relatively holistic structure and underwent minor changes in the context of individual life. In today's information society, most of the properties of information are relative, and therefore, their truth, novelty, objectivity and stability may change. The constant change of information context and content has led to the need to acquire new knowledge and experience, verify them, supplement, change the structure and so on.

The ability to operate with a large amount of information content, which we have identified as a public necessity, becomes the basis of personal and professional success in today's information society. The virtualization

of social relations has led to the need to be competent in the use of information technology.

Modern researchers pay attention to the following aspects of the individual's ability to work in the information society:

- information culture,

- media literacy,

- computer literacy,

- information and communication,

- information technology,

- ICT competence.

In order to more accurately operate with the concept of «information competence» should consider the meaning of the concept of «information». Given the multidisciplinary nature of the definition, most researchers agree that «information» is data that has some meaning or significance. Thus, information competence can be seen as a person's ability to operate with the meanings that he receives in the information environment. Information is data ("dry fact", "objective properties / features"), which has become knowledge of collective and individual significance and "overgrown" with certain symbolic interpretations of culture. Within each culture, one can look at a world that has a certain physically stable structure (described in data language) from a certain angle.

Information culture and its evolutionary significance can be assessed in terms of individual ability to counteract the globalization impact of informatization, promote the development of internal mechanisms of self-limitation of information consumption and assess its quality and content according to current human needs.

We propose a structure of information culture of the individual, which consists of such invariants of socio-professional activities. They provide the main stages of interaction of the individual with the information network in the process of professional and other types of social activity:

- ability to use ICT (information and communication technologies);

- ability to work with information;

- critical thinking and impartiality;

- ability to communicate and establish interaction;

- ability to learn and master new knowledge and experience.

In the framework of our study, socio-professional invariants, which are part of the information culture of the individual, form two fundamentally different levels of information culture of the individual:

- technological level of information culture, which indicates the ability of the subject of social relations to interact with digital information technologies, use ICT and its functionality;

- socio-psychological level of information culture, which is associated with the ability of the subject of social relations to analyze and process information, use it for social activity.

4. Practical Implications for Professional Competencies of Civil Servants Study

Public administration reform processes require the development of informative tools for assessing change, analyzing successes, problems, barriers, and so on. It is important to be able to analyze the situation at different levels - central and local (at the level of regions, districts, cities, communities). There are several areas of analytical consideration - the state of awareness of DS reform, satisfaction with reforms, job satisfaction, functional structure, state of competence, state of functional capacity, level of organizational culture, motivation, level of innovation, digitalization, discrimination, bullying, corruption and more. In addition, it is necessary to analyze the state of interaction between the civil service and society, public opinion, to assess the effectiveness of the civil service in an integrated approach.

Such a comprehensive analysis is most appropriate to build on the principles of sociological monitoring to provide for the formation of targets, to have a baseline assessment, regular monitoring, dynamic analysis, identification of bottlenecks.

So far, several different studies have been conducted, where the target group is civil servants. The formation of a sample for any sample survey of civil servants remains a problem, as available statistical information records the number of staff positions, the number of vacancies and the actual number of working civil servants, which is updated quarterly on the number of civil servants in regional and district civil administrations. are in terms of regions and together at the national level). The lack of statistical data on the structure of civil servants by sex, age, length of service in the civil service, by categories, etc. makes it impossible to assess the representativeness of the sample of civil servants, and, accordingly, the ability to repair or weigh the data.
The piloting of the monitoring tool confirmed the

effectiveness of the online survey method and the analytical prospects of the proposed tool.

Even at the level of pilot research, the method of survey-experiment (factorial design) demonstrated significant heuristic possibilities of elucidating the latent structures of professional culture (including values) and professional ethos of modern Ukrainian civil servants. The methodology largely avoids the bias and inaccuracy of the survey results, which are due to the desire of respondents to provide socially desirable answers and avoid stigmatization or punishment.

At the same time, the limitations of the methodology cannot be ignored. First, the methodology is quite complex at the stages of development, implementation and analysis. Compared to the method of traditional mass survey, it requires more intellectual resources, and also provides special organizational measures at the stage of empirical data collection, in particular, is costly and difficult to survey using a paper questionnaire. Secondly, the methodology requires very careful handling of the operationalization of theoretical concepts in specific dimensions and levels of the vignette, as well as the actual main issue of the vignette. There is a danger that operationalization will be insufficiently accurate and inexhaustible.

In the case of our piloting of the survey-experimental methodology on the topic of research of latent structures, it can be noted that in general the goal of the study was achieved – the methodology identified important components that affect the assessment of civil servants as suitable or unsuitable for their work. The significant role of gender and age prejudices, which would be difficult to detect by other means of research, was revealed, and the role of such factors as competence and rejection of corruption in the professional ethos of modern Ukrainian civil servants was confirmed. Perhaps equally important, according to the study, such theoretically important factors of professional culture as attitude to subordination, empathy for clients, efficiency and openness to public control in reality were insignificant (i.e. interviewed Ukrainian civil servants do not think they presence or absence are important for assessing the "suitability" of a person for modern civil service). Thus, taking into account this fact, as well as the fact that our proposed model of factors of professional ethos of modern Ukrainian civil servants managed to explain 42% of the variance of the dependent variable, it is advisable to continue searching for factors that are significant and more explanatory.

If we move to the level of theoretical generalizations, the analysis showed that the current professional ethos of Ukrainian civil servants does not fit perfectly into either the bureaucratic or democratic model. The analysis of the results obtained using the method of factorial design of the survey-experiment showed that the state of professional ethos of civil servants of Ukraine is generally "blurred" just as the structure of societal characteristics of the professional group of civil servants has become blurred since 2006. The state of its ethos no longer corresponds to the former bureaucratic model inherent in the Soviet command-and-control system.

The applied method of design of the survey-experiment revealed signs of heterogeneity (heterogeneity) of the new structure of the civil service, which is already radically different from the former homogeneous (homogeneous) Soviet public administration system. This, in our opinion, was evidenced by significant differences in the assessments of respondents depending on the categories of positions they hold. In particular, it concerned imperatives such as "efficiency" and "age" of public service.

In general, in our opinion, the module proposed in the study can be used in future monitoring studies of the professional ethos of domestic service, but it needs some additions and reformulation of the summary question and some dimensions.

In addition, the developed methodology can be used as a basis for a permanent online tool for national monitoring and assessment of the functional and competence capacity of civil servants in Ukraine. The advantage is that the obtained data can be disaggregated and provided material for analytical conclusions at the level of individual areas, individual categories, on the criterion of departmental affiliation (subordination). It is also possible to develop and apply additional indicators for analytical conclusions (for example, the year of the last training or professional development, participation in advisory groups, involvement in the preparation of government decisions, etc.).

Such monitoring will enable:

- to determine the level of formation of functional status, professional and personal competencies of civil servants in Ukraine (at different levels);

- identify the educational needs of civil servants;

- provide recommendations for the development of individual competencies and strengthen the functional readiness of the public administration system as a whole;

- to offer recommendations on the criteria for selection of candidates for civil servants, training and retraining programs, improving the effectiveness of interaction between civil servants and society, the formation of a positive image of the public administration system as a

whole.

In order to form a strategic vision of the development of public policy in the civil service, diagnose existing needs and current problems of effective functional management of the civil service, it is necessary to introduce annual, representative of the main socio-demographic characteristics (gender, age, area, size, etc.) and comprehensive sociological monitoring of the civil service in Ukraine.

Timely assessment and analysis of changes, successes, problems and barriers that arise in the process of reforming the public administration system will allow to promptly research trends and implement practical steps and initiatives to meet the needs and overcome difficulties in the civil service.

5. Conclusion

The main purpose of the professional activity of a civil servant is to ensure the implementation of state functions and the implementation of service mediation between the state and ordinary citizens.

The organization of purposeful activity involves effective decision-making and redistribution of power. Working in difficult conditions or in situations of uncertainty requires that the civil servant has operational flexibility and be ready to change the algorithm of activity or can focus on non-standard innovative way of performing activities, which will force some reorganization of group activities and empower members.

The challenges of the information society have also led to the need to use ICT in professional activities. They allow you to receive new information and communicate more effectively in the social environment through digital and telecommunications. This invariant competence is related to the ability of the subject to use digital technologies in professional activities, a positive attitude to their involvement in everyday activities and the ability to organize the production process, taking into account the possibility of attracting the latest digital technologies.

Public administration reform processes require the development of informative tools for assessing change, analyzing successes, problems, barriers, and so on. It is important to be able to analyze the situation at different levels - central and local (at the level of regions, districts, cities, communities).

References

[1] Kolodii, S., Kochuma, I., Marenych, A., Rudenko, M.: *Features of functioning national model of resource economics in Ukraine*. Financial and credit activity: problems of theory and practice 4(27), 359–369 (2018)

[2] Kolodii, S., Rudenko, M., Gariaga, L., Kochuma, I., Kolodii, S.: *The influence of decisions on increasing social standards on monetary policy*. Financial and credit activity: problems of theory and practice 2(37), 37-46 (2021)

[3] Omelyanenko, V., Braslavska, O., Biloshkurska, N., Biloshkurskyi, M., Kliasen, N., Omelyanenko, O.: *C-Engineering Based Industry 4.0 Innovation Networks Sustainable Development*. International Journal of Computer Science and Network Security 21 (9), 267–274 (2021). https://doi.org/10.22937/IJCSNS.2021.21.9.35

[4] Artyukhov, A., Omelyanenko, V., Prokopenko, O.: *University Technology Transfer Network Structure Development: Education and Research Quality Issues*. TEM Journal 10 (2), 607–619. (2021) https://doi.org/10.18421/TEM102-16

[5] Afonin, E. A.: *Social Cycles: Historical and Sociological Approach*. Kharkiv: View «Gold Mile» (2008)

[6] Afonin, E., Martynov, A.: *Ukrainian miracle: From Depression to Social Optimism*. Kyiv: Kyiv-Mohyla Academy Publishing House (2019).

[7] Afonin, E.A.: *Human identity and features of its influence on politics and public administration*. Conceptual bases of interaction of policy and management: textbook. Nat. Academy of Public Administration under the President of Ukraine. Kyiv: NAPA (2010)

[8] Pidorycheva, I., Shevtsova, H., Antonyuk, V., Shvets, N., Pchelynska, H.: *A Conceptual Framework for Developing of Regional Innovation Ecosystems*. European Journal of Sustainable Development 9(3), 626–640 (2020). https://doi.org/10.14207/ejsd.2020.v9n3p626

[9] Amosha, O., Pidorycheva, I., Zemliankin, A.: *Key trends in the world economy development: new challenges and prospects*. Science and Innovation 17(1), 3-17 (2021) https://doi.org/10.15407/scine17.01.003.

Eduard Afonin, Doctor of Sociological Sciences, Professor.
Professor of the Department of Public Policy.
Educational and Scientific Institute of Public Administration and Civil Service, Taras Shevchenko National University of Kyiv, Ukraine
E-mail: bpafonin@gmail.com,
ORCID ID: 0000-0002-7493-6907

Olga Balakireva, PhD in Sociology.
Head of the Department for Monitoring Research of Social and Economic Transformations.
Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine, Ukraine.
E-mail: bon.smc@gmail.com
ORCID ID: 0000-0003-0790-7142

Vitaliy Omelyanenko
Ph.D. (Economics), Associate Professor.
Head of Institute of Innovation Development Strategies and Knowledge Transfer, Ukraine
E-mail: omvitaliy@gmail.com
ORCID ID: 0000-0003-0713-1444
Scopus ID: 56624321000

Ilona Klymenko, Candidate of Physical and Mathematical Sciences, Associate Professor.
Associate Professor, Department of Public Policy, Educational and Scientific Institute of Public Administration and Civil Service.
Taras Shevchenko National University of Kyiv, Ukraine.
E-mail: iklymenko@ukr.net

Iryna Korchak, Postgraduate student.
Department of Public Policy.
Educational and Scientific Institute of Public Administration and Civil Service, Taras Shevchenko National University of Kyiv, Ukraine.