Anti-corruption Education of Public Officers Using Digital Technologies

Olga A. Astafurova, Anna S. Borisova, Eyda V. Golomanchuk, and Tatyana A. Omelchenko

Abstract—The research is devoted to the development of anti-corruption education by means of developing and adopting an information analysis system "Methodology and tactics of anti-corruption management for public and municipal officers" and its implementation into the activity of executive authorities. The suggested software application performs functions of an electronic teaching complex in the sphere of public officers training and retraining, allows to provide education, assessment, and performance appraisal, to analyze results obtained, to make adjustments in the personnel retraining. The information analysis system testing has been planned in the Volgograd region executive authorities that is why in the article emphasis is given to anti-corruption activities in the above-mentioned region.

Index Terms—Anti-corruption education, teaching complex, information analysis system, personnel retraining.

I. INTRODUCTION

Corruption poses a serious threat to public authorities' performance based on law and justice, to the supremacy of law and breaks confidence of population towards the authorities, considerably slows economic development of regions [1]. This necessitates working out and assuming a complex of measures (of economic, socio-cultural, educative and legal nature), aimed at continued improving prevention. It is essential to focus on elimination of the factors and conditions that sustain corruption, to minimize the harmful effects, contributing the spread of anti-corruption ideas and views.

The Russian legislation has created the necessary conditions for effective anti-corruption work. However, to create sufficient conditions, anti-corruption work in the constituent entities of the Russian Federation must be activated.

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In recent years, the issues related to creation of anti-corruption environment and this subject education to various age groups are reflected in scientific works of both Russian and foreign researchers [2], [3]. However, scientific studies are aimed either at anti-corruption educational programs creation and at their implementation at the school level, or at anti-corruption education of business-community and with civil-society institutions [4], [5]. While and integrated approach is needed both regarding personnel training and retraining, and creating anti-corruption environment of governmental and municipal authority, which is certainly based on education and instruction.

With the development of the information society, a growing number of studies on the role of information technology as a catalyst for combating corruption. The use of information technologies in the world community proves their effectiveness for the implementation of anti-corruption practices. The government of the Russian Federation should invest in the development of software of its own production, the characteristics of which make it possible to fight corruption by means specially designed for local conditions.

II. PRACTICE OF ANTI-CORRUPTION TRAINING IN RUSSIA

For several years, work is in progress to develop an anti-corruption environment of governmental and municipal authority in various regions of Russia [6].

In regional government anti-corruption bodies, great attention is paid to prevention of corruption-related offences. The main anti-corruption activities include thematic seminars, lectures, testing to ensure legal education and promote legal literacy of civil officers in matters of countering corruption.

In particular, it is common practice in Volgograd region government bodies to organize and conduct educational lecture studies on anti-corruption topics for civil officers with invited lecturers from educational establishments, whose activity is related to the Civil Service. For example, seminars on the analysis of typical common mistakes made by civil and municipal officers in the process of declaring their income and assets are in demand. The seminar offers solutions to these problems, identifies special markers that can show the presence of such errors personnel departments [7]. In the executive branch of Volgograd region government, close coordination on these issues has been instituted with representatives of Institute of Management – the branch of Federal State Budgetary Educational Institution of Higher Education (FGBOU VO) "Russian Presidential Academy of National Economy and Public Service".

In order to introduce remote verification methods of the level of knowledge of public officers in the committee of

tariff regulations of Volgograd region, a testing is sometimes held for civil officers to check their knowledge of anti-corruption legislation and public service regulations. During testing in working hours, every officer gets a "survey letter" on personal computer with multiple-choice questions from a human resource officer. Results of the testing are accumulated, analyzed and taken into account in the process of civil officers' performance evaluation.

The Civil Service and Personnel Department of Volgograd region Governor's administration, periodically, and at least twice a year, holds seminars for people, reappointed as civil officers, on the issues of observance of restrictions and prohibitions established by the anti-corruption legislation, requirements for avoiding or resolving conflicts of interests, with clarification of provisions of Anti-corruption conduct standards, approved by the Volgograd region Governor's decree dated 15 June 2015 № 523 [8], as well as on matters of corruption prevention. The similar practice is adopted in all executive authorities of Volgograd region.

Civil officers' attention is also drawn to non-admittance of behavior that may give to the wider public the appearance of promise, offering or giving a bribe and even consent to bribe taking; non-admittance of use of official powers contrary to the exigencies of service. The review of jurisprudence in the sphere of implementation of anti-corruption legislation, which contains examples of corruption offences and formal assessment of civil officers' conduct for signs of relevant offence evidence, are brought to the officers' attention.

In the process of this awareness-building, the unit for corruption offence prevention, provides specially-designed guidelines for civil officers' anti-corruption behavior, for prevention and resolution of conflicts of interests in the civil service, for countering corruption as well as containing information about liability for corruption offence. All persons, newly appointed to public positions and to civil services of Volgograd region, must get acknowledged against signature to the above mentioned guidelines, as well as to anti-corruption law regulations.

Furthermore, the Directorate for civil service and Volgograd region Governor's administration, on a regular basis, provides advice to persons holding a public office of Volgograd region and to civil officers on anti-corruption norms observance, awareness-raising activities, organizational arrangements and training events are also being held on the matter of changing the anti-corruption legislation in force.

Changes in the anti-corruption legislation are reasons for organizing and holding alignment meetings in the Volgograd region Governor's administration for officers of personnel department and units for prevention of corruption and other offences in the executive authorities of the region, in order to study new provisions, to explain their substantive content and special aspects of law enforcement for countering corruption. In course of such activities, they also share the matured experience in the system of executive authorities regarding the implementation of anti-corruption legislation in force. Following the results of alignment meetings, thematic newsletters are formed and subsequently sent to the Heads of all executive authorities of Volgograd region to be applied in practical activities of personnel services and subdivision in order to prevent corruption and other kind of offences.

In addition to the above mentioned, every year, Volgograd region executive authorities hold events, which focus on the International Anti-Corruption Day on 9 December, in which personnel services produce visual aids and guidance materials on the anti-corruption subject for distribution to civil officers.

In order to counter corrupt practices effectively, Volgograd region executive authorities have launched the confidential helpline for matters related to corruption offences, which operates in the 24-hour automatic mode. Moreover, on the official Internet portal of the executive authorities there is an electronic form, which may be used to transmit information on incidences of corruption.

In order to raise legal literacy of the citizenry and to prevent corrupt practices, every month, Volgograd executive authorities ensure operation of the direct (hot) line. Information about day and time of this line operation is posted on the official sites of regional public authorities and in the media.

It should be noted, that during the period from 2016 to 2018, during direct line work, as well as from the results of analysis of calls, made to the telephone helpline, there were no declared cases of anti-corruption legislation violation by civil officers of Volgograd region.

According to the results of a comprehensive sociological study related to corruption practices and legal awareness evaluation among the citizenry, proper understanding of anti-corruption behavior standards on Volgograd region territory LLC "ABV" [9], in 2018, the number of citizens who considered that the level of corruption among regional officials was 50%, fell to 17,3% compared to the indexes of 2015 (26,7%). The number of citizens, who characterized Volgograd region Administration as the most corrupt power structure has also decreased more than half from 26% in 2015 to 12% in 2018. This fact illustrates the growing confidence of the citizenry towards the authorities as well as the reduction in the number of corrupt practices in this sphere.

According to the authors of the article, positive dynamics is directly related to the anti-corruption activities carried in the Volgograd region executive authorities. In addition, due to the fact, that the majority of people in the region (46%) mention low moral and ethical principles of officials, as the main reason of corrupt practices, the necessity of carrying out a complex of training and awareness-rising measures should not go unnoticed. It should be done for the purposes of legal awareness and legal literacy level raising with persons in government service and civil officers for anti-corruption issues.

It may therefore be concluded, that Volgograd region executive authorities follow the right vector of developing anti-corruption tactics and technologies, which show their operational effectiveness.

Adoption of an information and analysis system, for the purposes of informational support using modern information technologies of anti-corruption knowledge and skills acquisition, would considerably facilitate the development of the region in this sphere.
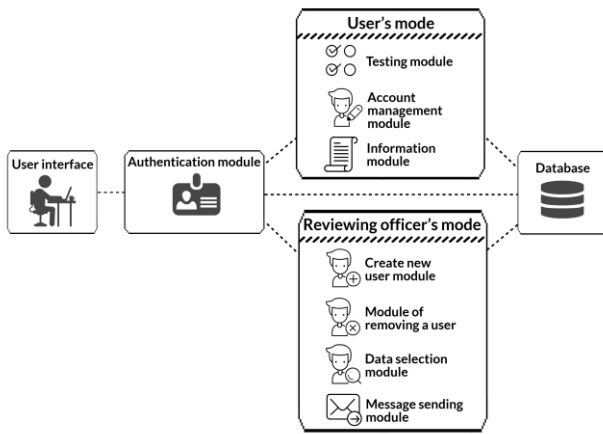
Fig. 1. Architecture of the information analysis system.

Those measures will help to develop a preventive slant for the prevention of corruption: anti-corruption education using digital technologies in the form of practice oriented information analysis system to combat corruption. It is planned to test the systems at the premises of Volgograd region executive authorities. The system implementation into the regional anti-corruption practice will allow the anti-corruption environment to be evaluated objectively and forecast its growth.

III. Design and Implementation of the Electronic Training Complex

Resolve the problems, raised previously, a specialized information analysis system has been designed for the purpose of creation of a single space for civil officers education and testing, as well as for monitoring, analysis, planning and forecasting the key indicators of anti-corruption processes with further results visualization and report generation

The information analysis system suggested in the context of the study entitled "Methodology and tactics of anti-corruption management for public and municipal officers" is multifunctional, which is proved by the presence of four components in its structure, namely information, training, testing and analytical ones.

The information subsystem provides and extensive knowledge base for the subject matter under consideration, which allows not only to get acquainted with reference content but also to make requests subject to issues of user's interests concerning the matters of countering corruption. This subsystem also contains a complex of visual materials (infographic, video lectures, video tutorial), the purpose of which is to present the information quickly and clearly to the civil officers about proper behavior in case of any operation situation.

The training subsystem includes methods of holding anti-corruption workshops and a complex of training video course.

The training subsystem makes possible to assess public officers' knowledge of the subject under consideration and to reveal psychological foundations for corrupt practices with public officers. The series of tests is based on the long-term experience of work in the sphere of countering corruption

and has been developed taking into account not only legal aspects but psychological factors as well.

The analytic subsystem allows to prepare analysis of statistical data, which contains the results of testing, to identify weaknesses in public officers' knowledge in the field of countering corruption and adjust their learning process in this area.

The implementation of the system will allow to reject data processing in manual mode, to preclude errors of data processing and analytical reports preparing [10], [11].

The proposed information analysis system is a particularly innovative instrument in the field of public officers' training and retraining (as well as of legal personnel), which allows not only to carry out training and testing using modern information technologies, but also to evaluate officers' performance and to analyze the results, to make necessary adjustments to the activity of governmental and municipal anti-corruption bodies.

IV. The Teaching Complex Structure

Fig. 1 shows the software application architecture, which helps to automate operation of the information analysis system.

Software product under development includes the following modules:

1) Authentication module. Helps to carry out user authentication procedure by means of comparing the entered password (for a specified login) with the password stored in the database. The authentication module determines the mode of the registered user's work with the software product.

User's mode includes the following modules:

2) Testing module. It consists of several testing shells, which differ by the methods used to calculate the resulted of the test. All testing shells can operate in two modes: training testing and final testing.

3) Account management module. Helps the user to change the password to log in the system, to view messages from the reviewing officer and the results of tests taken.

4) Information module. It contains information about methods and tactics of countering corruption, anti-corruption guidelines and methodical recommendations, visual material (infographic, video lectures and video tutorial).

The data presented in the information module are selected from different sources, so they have different formats and presentation forms. To improve the quality of work with training materials, they were combined into a single structure.

It must be mentioned that access to information does not ensure a successful anti-corruption initiative. It is important to stimulate the use of all functions of the software with the necessary frequency. The need for retraining is determined individually for each user based on the results of testing and certification of employees.

The reviewing officer's mode consists of the following modules:

5) Create new user module. It contains a template for creation of new users of the system. Available fields:

login, password (is generated automatically), surname, name, patronymic, job position, structural subdivision, period of service. The template helps to assign the category of «reviewing officer» to the user.

6) Module of removing a user. It removes users' profiles from the database of the testing system.

7) Data selection module. Helps to get data about testing results as a function of the selected user.

8) Message sending module. Helps the reviewing officer to set date and time of the following testing of any user and to notify him by sending a message to the relevant user's account.

The database is part of the information and analytical system. It contains tests, all user information and test results. Database tables for storing test items consist of test questions and correct answer keys. The tables for storing test results are updated after each test in the final testing mode and contain the user's identifier field, the date and time of the last passing of a certain test or lesson, the result of passing the test or lesson.

Methods of evaluation of tests are part of the developed software product. Information about users is formed according to the template for creating new users of the system. Only the administrator can access the information about the users of the system stored in the database of the information and analytical system.

User interface makes possible interaction of the information and analysis system users.

Programs are coded in C# language, within the development environment Visual Studio. The database is established in the Database management system Microsoft Access.

The developed software product is intended for using in Windows operating systems.

According to the national program "Digital economy", approved by the government of the Russian Federation in 2017, the priority in the use of software by public authorities and companies with state participation should be given to domestic software solutions. Russian software is considered to be software included in a special register maintained by the Ministry of digital development, communications and mass communications of the Russian Federation. Measures are envisaged to stimulate software development so that by 2024 the share of domestic software in government structures exceeds 90%, and in government companies – 70%.

In the case of transition of public institutions from the Windows platform, the development of information and analytical system software, which described in the article, will be aimed at expanding the list of supported platforms for cross-platform.

Software product allows to monitor the level of literacy of State civil officers in anti-corruption issues and can be used for providing automation of analytical works in order to justification and adoption of administrative decisions.

V. Conclusion

Anti-corruption education of civil officers is a preventive measure. Any prevention involves painstaking daily work. In the era of digital technologies, some aspects of this work can and should be automated.

The implementation of the present electronic training system will help to provide comprehensive approach to meet the challenges of anti-corruption education, to monitor in stages the implementation of measures, and to give an objective assessment of their performance, to analyze the anti-corruption environment and to forecast its development. The use of this software product will help in rejecting the information processing in a manual mode, will enable error-free data processing and analytical reports preparation.

The practical significance of research consists in the possibility of using the designed information analysis system both for one-time training and testing in the area of countering corruption as well as for systematic evaluation of public officers' performance and for analysis of anti-corruption environment, based on the system of indicators, which reflect practical implementation of anti-corruption measures and reveal psychological presuppositions of corrupt practices with public officers; and in building prognostic dependencies.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Olga A. Astafurova managed the research group, developed the architecture of the information and analytical system; Eyda V. Golomanchuk developed a set of methodological materials on anti-corruption education; Anna S. Borisova developed a set of visual materials on anti-corruption training; Tatyana A. Omelchenko created a prototype of information and analytical system; Olga A. Astafurova and Anna S. Borisova wrote the paper; all authors had approved the final version.

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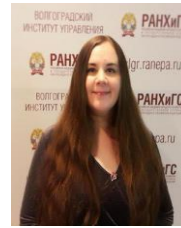
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