Interaction between the municipal authorities of St. Petersburg and local communities via Internet communications

Aleksei Balashov¹, Anton Barabanov¹, Viktoria Degtereva², Maxim Ivanov², Ekaterina Usacheva¹

¹ North-West Institute of Management of the Russian Presidential Academy of National Economy and Public Administration, St. Petersburg, Russian Federation
² Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russian Federation

*E-mail: aleksey.i.balashov@gmail.com; tony.barabanov@list.ru; degvi@yandex.ru; ivanov_mv@spbstu.ru; UsachevaEA@yandex.ru

Abstract. The level of civil activity and participation of local communities in solving local problems is an important prerequisite for spatial development. The setting up of local communities, to a large extent, is the outcome of self-determination, the result of the actions of social actors, aimed at value-oriented and active involvement of citizens in local self-administration. Forming the local identity, ensuring the activation of the civil position, is one of the major objectives of municipal authorities. In St. Petersburg, where the local identity of the population is quite vague, and the municipal authorities, in fact, are dependent on the city’s administration, which is preconditioned by the status of the city of the federal significance, the role the municipal authorities play in solving problems of the city’s development must be reconsidered.

At the height of the fourth industrial revolution, information technology is expanding the context and motivation for participating in the civil life, increasing unprecedentedly the level of public discourse and ensuring an interactive network environment for communications between the municipal authorities and local communities.

In the research study, we evaluated the quality of communications between the municipal authorities of St. Petersburg and local communities through official websites and social media pages of intra-city municipalities of St. Petersburg. The research was conducted using the methods of content analysis, communicative-discourse and composite-graphical analysis, and the expert evaluation method. It was concluded that the existing resources are hardly suitable for solving the problems of intensifying civil participation of local communities and some guidelines were developed to detect the target audiences and expand the range of tools used for interactive communications.

1. Introduction

According to today’s scientific concepts, the most important prerequisite for the sustainable development of territories is active involvement of the population in the processes of managing the territory and solving the problems of spatial development. In the system of local self-government, it is very important to make citizens participate more actively in resolving the issues of local importance because of the very nature of this type of governance. The quality of the population’s life directly...
depends on the extent to which every resident is involved in the processes of spatial development, both in terms of his or her values and actions. [1]

Citizen activism includes all the ways people follow to direct their attention to the problems of social life, participate in the issues and contexts outside the limits of their private life. [2] Citizen activism and initiatives from bottom to top are effective specifically at the local level, when the citizens can directly feel the effects of communication with the municipal authorities and experience the results of the decisions taken. The lack of activity on the part of the citizens can be perceived as one of the biggest barriers for spatial development, since the citizens do not feel their own significance and responsibility in this case. [3]

The local community is not just a mechanical unification of citizens by the territorial principle, but a unification of a higher level based on value conscious factors. [1] According to a number of researchers, a municipality should be perceived as a territorial community that has developed historically due to the self-determination of the local citizens and the operation of social actors, among which the municipal authorities play a crucial role. [1, 4, 5, 6]

The local government is facing the challenge of providing effective interaction mechanisms to communicate with the population. However, an important prerequisite for making such communication effective is to form the local identity of the people, which ensures that their civil position will be more active.

For St. Petersburg, this problem is very acute, since the territorial identity (a Petersburger) dominates the local identity of the citizens (resident of a district, municipality), which is becoming increasingly blurred. [7] Today’s applied studies show that the residents of St. Petersburg are poorly involved in discussing and tackling the local problems.

Another aspect of the problem, which is common to all cities of federal significance in the Russian Federation, including St. Petersburg, is that the provisions of Article 79 of Federal Law No. 131-FZ dated October 6, 2003 “On the General Principles of the Organization of Local Self-Government in the Russian Federation” specify how the municipal government is organized in the cities of federal significance. In fact, such cities can independently build and determine the system of local self-government. The role of municipal authorities is often reduced to fulfilling a fixed number of functions, mainly to offering municipal services, with the local authorities being completely financially dependent on the city authorities.

Even though the most important prerequisite for successful territorial governance at the local level is the quality of interaction between the municipal authorities and the population, the former prefer to invest their limited resources in offering services, rather than develop public communications and mechanisms for interacting with the population. It should be noted that public communications are also a state or municipal service, and its quality affects how the activities of the state and municipal authorities are perceived, the level of trust in them and the expectations of the population. [8]

Today the government authorities of the cities of federal significance have to search for ways and construct scenarios of perspective development in difficult socio-economic and political conditions. Implementing the principles of political and public subsidiarity in the system of territorial governance implies that the importance and the role of the local self-government in solving the problems of urban development should be reconsidered. [9, 10, 11] It can be concluded that, despite some positive examples, the potential of the local self-government in St. Petersburg has not been realized to a maximum extent, and the functionality of intra-city territorial units is insufficient.

The lack of effective communications between the authorities and the population, and the insufficient intensity of information flows form the prerequisites for setting up alternative institutions and structures. These can influence the citizens, adopt and broadcast their own ideology, and coordinate activities that might be aimed against the official government structures. [12]

Technical, economic and socio-cultural changes within the fourth industrial revolution actively influence the formats and technologies of communication between the government and the population. According to K. Schwab, new information technology seriously complicates the functions fulfilled by
the authorities. In the time of the fourth industrial revolution, the format of communications between the authorities and the population is turning to subject-subject rather than subject-object. [12] Information technology has a positive impact on ensuring the openness and transparency of procedures aimed at developing and taking socially important decisions, on exercising the citizens' rights to free access to information on the activities of the state and local authorities. Information technology is a tool for creating state platforms and resources for publishing legal and socially important information, realizing online communications between the state and citizens, and offering state and municipal services in real time. The principle of social interaction is one of the basic attributes of e-government. [13, 14, 15]

The information policy has been developed and improved since 1995. It was determined as one of the top priority areas for the state and municipal authorities in the Russian Federation. It was in year 1995 when the “Concept of Forming and Developing Russia’s Single Information Space and the Relevant Public Information Resources” was adopted and approved by a decree of the RF President. Subsequently, two important regulatory acts were passed: Federal Law No. 149-FZ dated July 27, 2006 “On Information, Information Technology and Information Protection” and Federal Law No. 8-FZ dated February 9, 2009 “On Granting Access to the Information on the Activities of Public Authorities and Local Government Bodies.” The last of the mentioned documents, in particular, regulates the mandatory existence of official websites of the state and municipal authorities and the requirements for the information posted on the official websites. At present, the national program “Digital Economy of the Russian Federation” has been formed and is being run, including one of its directions “Digital Public Administration.”

It can be said that at the moment Russia has worked a certain way up for introducing information technology in state and municipal administration and even reached some success, in particular, in building an “Electronic Government”, which is confirmed by the fact that Russia's position in international rankings has become stronger (for example, the EN E-Government Ranking). However, in the context of the problem we are considering, more intense communications between municipal authorities and local communities, there is no point of saying that there is a significant improvement in information interaction thanks to new technologies. Since 2017 within the RF national project “Forming a Comfortable Urban Environment” as part of the strategic development direction “Housing and Public Utilities and Urban Environment”, it has been determined as a top priority that the local population should be widely involved in solving problems of spatial development.

Information technology is increasingly empowering citizens, providing them with a new way to express their own opinions, coordinate joint efforts, exercise public control and even intensify protest activity, finding paths to get round state supervision. Digital tools are expanding the context and motivation for taking part in civil life, unprecedentedly increasing the level of public discourse and providing an interactive network environment for decision-making. [16,17,18]

The existing technologies make it possible to involve a larger number of citizens in the process of developing the municipalities and the state as a whole, and increase the level of public discussions of social and political problems. Information technology is the key tool for intellectualizing society, developing the educational system and culture, and informing the citizens about the political, economic and sociocultural processes taking place in the country as a whole and in a specific area. [19]

Studying the mechanisms by which municipal authorities and local communities interact, it should be specifically noted that information technology has a tool nature. [20] Information technology and tools that are used to build communications between the government and the citizens can be divided into two groups: those created by the authorities specifically to involve local communities in interaction processes (for example, official websites of a government body, special applications), and tools and technologies created by independent developers to be used for solving the problems of state and municipal governance (for example, social media, messengers, etc.). [2] Just the same as the quickly evolving landscape of communication technologies transforms individual experience in the social sphere, the idea of participating in civil life is changing, both in
terms of how people do it and how it is measured. The more time people spend time online, the lower is their trust in the government and the lower is their level of compliance. However, according to the experts such negative effects of the Internet can be mitigated if the citizens use e-government more widely. [16]

Proactive interaction strategies in state and municipal governance form the expectations and satisfaction of the citizens in a way similar to how loyal customers are formed in the commercial sector. As for state and municipal governance, effective communications do not only form a certain attitude and satisfaction on the part of the citizens, but also help to mitigate some negative aspects and misunderstandings, which inevitably arise when the problems of spatial development are tackled. [21,22]

Using Internet communications for interaction is, undoubtedly, the dominant trend, both in the private sector and in state and municipal governance. It results in a change of the models used for establishing communication, a modification in the hierarchy of traditional processes, and rejection of traditional bureaucratic thinking. [23] The effectiveness of established interaction between the municipal authorities and local communities on the Internet largely depends on whether a “customer-oriented” process can be built, that is, whether the population’s needs and the profile of local communities can be taken into account, when technologies for online interaction are chosen and introduced.

2. Methods

The purpose of the applied research was to assess the quality of interaction between the municipal authorities of St. Petersburg and the local communities on the Internet, as well as the efforts to enhance the civil participation of the local communities through online technologies and tools.

The official websites and pages on social media of intra-city municipalities of St. Petersburg were the object of analysis in this research study (a continuous sample by 111 municipalities).

The ranking scale was developed based on the model of a “Ladder of Civil Participation” proposed by Arnstein Sherry R. (1969). This concept suggests that out of the eight levels of civil participation / non-participation, truly civil activity begins at the levels when the principles and mechanisms of partnership, delegation of authority and public control are introduced into the system of interaction between authorities and the population. Such forms of interaction as: informing, advising (studying the citizens’ opinions on specific issues) and placation (by which the author understands involving the citizens in planning work) provide just a certain degree of influence on the municipal governance system and represent a form of tokenism. [24]

To conduct the study we used the methods of content analysis, communicative-discursive and compositional-graphic analysis of websites and pages on the social media of intra-city municipalities of St. Petersburg, and applied an expert assessment method. [25, 26, 27] In order to assess the effectiveness of established interactive communications, the technical characteristics of communication channels and empirical data have to be generalized. [28]

The compositional and graphic features of the analyzed information resources were audited by the analysis components: analysis of the target groups of the website, its design, content (by two sections “News” and “Citizens' Requests”), usability and performance.

By analyzing and assessing the elements of the compositional-graphic model of websites, it is possible to build a theoretical model and make recommendations for optimizing and improving the effectiveness of information resources.

3. Results and Discussion

The generalized results of the expert evaluation of the compositional-graphic website model are shown in Table 1. These results demonstrate that the analyzed resources are not suitable for solving the problems concerning better civil participation and formation of the citizens’ local identity. The assessment by the parameter “compliance with the conception” requires a separate explanation. A satisfactory grade reflects the current situation when the municipal authorities are obliged to create
official Internet resources to ensure the openness of their activities by placing in the public domain a set of data clearly defined by the federal law. The task of ensuring an open dialogue and improving civil participation was not set initially, is not fixed formally, which calls for developing new principles and strategies aimed at establishing interaction between the authorities and local communities on the Internet.

Table 1. Expert evaluation of the compositional-graphic analysis indicators of the official Internet resources of St. Petersburg intra-city municipalities

| Assessed component                                      | «3» - satisfactory value of the parameter | «2» - average value of the parameter | «1» - unsatisfactory value of the parameter |
|---------------------------------------------------------|-------------------------------------------|--------------------------------------|--------------------------------------------|
| Targeting                                               |                                           |                                      | +                                          |
| Consistency with the conception                         | +                                         |                                      |                                            |
| Consistency of the style, color and graphic design      | +                                         |                                      |                                            |
| Presence of banners, their “non-intrusiveness”, “design fit”, matching to the topic | +                                         |                                      |                                            |
| Fullness of the website                                 |                                           |                                      | +                                          |
| Informativeness, appropriateness of the presented information | +                                         |                                      |                                            |
| Easily readable text blocks                             | +                                         |                                      |                                            |
| No mistakes (grammar, syntactic, etc.)                  | +                                         |                                      |                                            |
| Understandable structure of the website                 |                                           |                                      |                                            |
| Friendliness of the search system                       | +                                         |                                      |                                            |
| Friendliness of hyperlinks                              |                                           |                                      | +                                          |
| Page length                                             |                                           |                                      |                                            |
| Presence of online inquiries/question forms              |                                           |                                      | +                                          |
| Usability                                               |                                           |                                      |                                            |
| Performance                                             |                                           |                                      |                                            |

Analyzing the target groups. It is obvious that the target audience of the studied resources includes the residents of the municipal districts. However, as mentioned above, this audience should not be perceived exceptional in terms of the geographical basis. The local communities are a totality of diverse interest groups acting as development agents. Unfortunately, all the resources that were analyzed do not divide the audiences into separate target segments, regarding which the existing information content could be oriented.

In the best-case scenario, the content is oriented by target groups indirectly through separating the topics of materials. In the “News” section, which is present on all the official websites that we analyzed and which defines the first stage of civil participation (“informing”), thematic division is only present in 10 resources.

The analysis of the design showed that, despite the obvious correspondence to the conception, none of the analyzed resources has a single style of pages, and the graphic elements do not support the content. In general, it can be concluded that 3-4 official templates are used in the design of the official websites of the local authorities, which are often totally inconsistent with the semantic content of the resource. The most common problem is the lack of a single color palette corresponding to the official branding of the municipality and the ideological concept, the lack of a single logic in the used fonts.
and no correspondence between the fonts and the background color. There is almost no animation, tooltips or any other interactive elements.

**Content Analysis.** Only 2 sites out of 111 are not content-rich. Most of the sites fully comply with the requirements of federal law No. 8-FZ dated February 9, 2009, “On Providing Access to Information on the Activities of the State Authorities and Local Self-Government Bodies”. However, it seems to overload the sites with information, complicates the readability of individual blocks and reduces the quality of information perception. Every site has a version for visually impaired people (which is a legal requirement), but there are no other language versions. We can agree with A.G. Sidorova, who highlights in a similar research study that although such resources do not have a sufficient foreign-language audience, in order to achieve the goals of tourism development and attract foreign investors, foreign-language versions of the web resources might be needed. [26]

The analysis of the content was carried out primarily by the “News” section. The analysis of publication activity is presented in Fig. 1.

![Fig. 1. Frequency of publications posted in the “News” section on the official websites of St. Petersburg intra-city municipalities](image)

As it can be seen from the diagram, news activity is extremely low. If we look at the experience of the commercial sector, in order to maintain interest in the resource, it is recommended that new materials and news should be posted at least every 2-3 days, however, for an active resource, at least 3 items of news should be published every day.

In 94% of cases, the news feed is on the main page and main menu. The news sections usually include announcements, official notifications, congratulations, including on official holidays. There is virtually no thematic division. In some cases, the source of the news is indicated, for example, a state authority (tax authorities, police), state and municipal institutions or organizations. The bottleneck of the news sections, the same as that of the websites in general, is using an official business style of narration, a “dry” formal language. Previews or podcasts are used in the news sections of less than a third of websites.

The analysis of the content of the “Citizens' Requests” section in the “Electronic Reception” format is presented in Fig. 2.
Fig. 2. Analysis of the content of the “Citizens’ Requests” section on the official websites of St. Petersburg Intra-City Municipalities

51 websites lack the “Electronic Reception” format. Although the “Citizens' Requests” section does exist, it contains information on the reception of citizens, hours of reception, and, in some cases, written application forms. In the section “Requests Statistics”, the relevant information for 2019 is available only on 11 websites, and you can find out about the answers only on 5 resources.

Only one website (Malaya Okhta Municipality) has a division into the "Ask a Question" function and "Report a Problem" function (divided by the objects of potential problems), and the "Offer News" function.

The interactive format in a form of thematic surveys or forums is completely absent.

**Navigation analysis.** The rules of designing the heading of the site, the presence of the name of the municipal authority and the visual symbol, contacts are always observed.

The main structure of the website is not always clear from the main page of the website of the municipal authorities, although it should be noted that there is a website map everywhere. All the websites are distinguished due to different conceptual organization of the pages. Pages with the same functionality can be duplicated in different sections, there is not always a link to the main menu on each page. Selective testing of the search system proves that it works satisfactorily, but the presence and marking of hyperlinks is to be criticized. Only one website has a mobile version.

**Activity on social media** of the municipal authorities of St. Petersburg is extremely low. Only 30 municipalities have pages on the most popular social medium VKontakte, one link from the website is dead. The number of page subscribers on average does not exceed 6-7% (when compared to the number of residents in the municipal district), the highest rate is in Admiralteysky District, being 24%. Moreover, the subscribers do not necessarily have to live in a certain district, they can work there or have other interests, which expands the circle of prospective subscribers and makes the subscription indicators even less impressive.

The content of the pages of the municipalities on VKontakte duplicates exactly the news feed of the websites, and interactivity is virtually absent. With the number of subscribers from 1000 to 3000 people, the number of likes does not exceed 8-10, and the number of comments and reposts tends to zero. The most successful resources (3 pages) can boast 1-2 relevant discussions per month, which, as a rule, are complaints about the work of the municipal authorities.

3 municipalities have dead links on their websites to Facebook, Instagram, Twitter and Youtube pages; 2 municipalities have Instagram pages, one has a Youtube channel.

Assessing the obtained results by the scale of the “ladder of civil participation”, it can be concluded that the Internet resources of the municipal authorities of St. Petersburg imply only informative and consulting formats. Therefore, it can be inferred that the municipal authorities of St. Petersburg do not use digital technology and tools enough to enhance the civil participation of the local communities and to form their local identity.
4. Conclusions

1. In the time of fourth industrial revolution, the format of interaction between municipal authorities and the population is changing, the importance of traditional communication channels (mass media, written requests) is decreasing, and the intensity of information flows is growing, which affects the nature of the developing social interaction processes. The basis of effective interaction between government and the population is social activity. The lack of activity on the part of the citizens can be considered as one of the biggest barriers to local development, since in such case the inhabitants of an area do not feel their own significance or responsibility for the area.

Moving away from traditional red tape approaches to modern local governance is becoming increasingly important. However, more frequently this is manifested in theory or proclaimed in strategic planning documents, rather than being implemented in practice. One of the obvious barriers is the fact that the municipal employees do not have sufficient competencies and experience in using modern Internet technology. The skills related to developing and implementing communication strategies on the Internet should be included in the framework of competences of university graduates for the major “public administration.” [29, 30]

2. The local authorities can operate effectively only if there is a developed and interactive system of social communications, and if the citizens are actively involved in taking and implementing decisions on spatial development.

The dominant direction in using new technologies is to expand the use of online mass communication media both in state and municipal governance, to change the models, relationships and hierarchies of the traditional processes in favor of more active civil participation.

3. Despite the many possibilities of information technology in solving the problems associated with creation of local identity and improvement of civil participation in solving problems that have local importance, the municipal authorities of St. Petersburg are not using the existing Internet resources and technologies enough. The lack of motivation, the low transparency of the process and no tracking ability reduce the activity of participation in online communications, although the architecture of modern websites and social media, the facilities they provide, are forming the audience, its identity and social activity. This is largely caused by the lack of a single comprehensive approach to the information interaction of the municipal authorities and the population, poor reactivity of municipal authorities to the feedback, technical limitations and the lack of qualified specialists.

The identified problems can only be overcome if the following conditions are provided: a single information policy developed for the municipal authorities, new standards and design requirements for the Internet resources oriented on their consumers living in the area. Many of the identified drawbacks can be eliminated by following the recommendations on the usability and accessibility of the composite-graphic model of websites and pages on social media.
4. The audience should not be understood as a kind of homogeneous community. Active interaction on the Internet contributes to searching for new meanings, new identity, forming interest and influence groups. It is obvious that the communication channels, architecture and materials of Internet resources should be oriented on individual target segments. In addition, the municipal authorities need to adopt the policy of openness, insisting on real names and affiliation, both in terms of their own representatives, and the citizens who participate in the interaction. It is important to provide for the possibility of publishing and updating statuses and photos, clarifying the location, having several accounts for different target audiences, broadcasting information and practices between different resources.

5. In order to form local communities and enhance their participation in local self-government, initiatives should be planned and encouraged in the field of electronic participation. For this, the local communities can be involved in many ways and forms. Online surveys and web analytics not only help to get feedback, but also to have a clearer picture the profile of target audiences. Online discussions and debates, seminars and trainings, development of special platforms allow the citizens to play a wider range of roles (spreading information, consulting, joint planning and implementation of projects), and activate their civil participation.

It should be concluded that only a systematic approach to planning and organizing the interaction between the municipal authorities and the local communities on the Internet can offer a solution to the problems of spatial development.

References

[1] Prokhorov D V 2015 To the question about the methodology of involvement of local communities in territorial management Bulletin of Samara State University 2(124) 59-65
[2] Gordon E Baldwin-Philippi J Balestra M 2013 Why We Engage: How Theories of Human Behavior Contribute to Our Understanding of Civil Engagement in a Digital Berkman Center Research Publication No.21
[3] Sobol A 2015 Governance and citizens’ engagement in terms of local sustainable development Journal of Economics & Management 19 (1) 63-77
[4] Molodov O B 2016 Social consolidation in the new reality: the problem of social activity and identity of regional population Problems of territory development 2 (82) 82-97
[5] Antipyev K A 2011 Features of the local community management Theory and practice of social development 8 58-59
[6] Tokmasheva Y V 2015 Managerial and amateur beginnings in the interaction between the municipal authorities and local communities World of science, culture, education 1 (50) 231-235
[7] Sociologists of St. Petersburg state University found out how St. Petersburg citizens perceive their city 2018 website of St. Petersburg state University
[8] Tat-Kei Ho A Cho W 2017 Government Communication Effectiveness and Satisfaction with Police Performance: A Large-Scale Survey Study Public Administration Review 77(2) 228-239
[9] Shamakhov V A Balashov A I 2016 The New Geopolitical Reality and Its Impact on the Strategy for Economic and Social Development of Russia Management consultation 1(85) 22-30
[10] Balashov A I Rogova E M Rudskaya I A 2015 Regional innovation system formation: the case of St.-Petersburg Economical revival of Russia 1(43) 96-114
[11] Rodionov, D. G., Kichigin, O. E., Silantieva, T. N. 2019 Features of evaluation of competitiveness of innovative regional cluster: institutional approach Scientific and
Schwab K 2016 The fourth industrial revolution World Economic Forum

Nikolova, L. V., Vykhodtseva, U. A. 2016 Systematization of methods of risk assessment of innovative activity of the enterprise Financial solutions of the XXI century: theory and practice Collection of scientific papers of the 17th international scientific-practical conference 201-207

Janssen, M., Charalabidis, Y., Zuijderwijk, A. 2012 Benefits, Adoption Barriers and Myths of Open Data and Open Government Information Systems Management 29(4) 258-268

Temirkhanova, M. T., Rudskaya, I. A. 2018 Innovative financial technologies: Russian experience and development prospects Fundamental study No. 8 110-115

Im T Cho W Porumbescu G Park J 2012 Internet, trust in government, and citizen compliance Journal of Public Administration Research and Theory 24(3) 741-763

Ustinova O.V., Khairullina N.G. 2015 The communicative technologies in the process of local government and the population interaction Modern problems of science and education 1-1 1456

Evans-Cowley J Hollander J 2010 The new generation of public participation: Internet-based participation tools Planning Practice and Research 25(3) 397-408

Bennett W L Segerberg A 2012 The logic of connective action Information, Communication & Society 15(5) 739-768

Holopov V A 2011 Legal aspects of perfecting institutes of direct democracy and information provision for the public administration Public Administration issues 4 106-115

Rodionov D.G., Kudryavtseva T.J., Skhvediani A.E. 2018 Human development and income inequality as factors of regional economic growth European Research Studies Journal 2 (21) 323-337

Zaborovskaya, O. V., Sharafanova, E. E., Plotnikova, E. V. 2015 Features of conditions of formation and development of human capital in the Russian Federation: factor analysis Society. Environment. Development No. 3

Garau C 2012 Focus on Citizens: Public Engagement with Online and Face-to-Face Participation - A Case Study Future Internet 4(2) 592-606

Arnstein S R 1969 ladder of citizen participation Journal of the American Planning Association 35(4) 216-224

Macnamara J 2005 Media content analysis: Its uses; benefits and best practice methodology Asia Pacific Public Relations Journal 6(1) 1–34.

Sidorova A G 2012 Compositional and graphic analyses of the government websites by the example of Altai Region Modern studies of social problems (electronic journal) 9 44

Olphert W Damodaran L 2005 Dialogue with Citizens – the Missing Link in Delivering e-Government? Systemics, cybernetics and informatics 3(6) 32-36

Sanina A Balashov A Rubtcova M Satinsky D M 2017 The effectiveness of communication channels in government and business communications Information Polity 22 (4) 251-266.

Lebedev O. T., Mokeeva T. V., Rodionov D.G. 2018 Matrix structures and technology innovations development and implementation trajectory Innovation Management and Education Excellence through Vision 2020 Proceedings of the 31st International Business Information Management Association Conference (IBIMA) 1759-1768

Kutergina E Sanina A Balashov A Willis J E 2019 Improving competency-based education through empirical values: a mixed method study of a master of public administration program International Journal of Public Administration