

DIGITAL DEVELOPMENT OF THE REGION: ISSUES AND SOLUTIONS

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ABSTRACT

Today, researchers are paying more and more attention to the relationship between digital and social inequality, the impact of digital opportunities on a person's position in society, his/her self-realization and more active participation in society. In the article, this problem is studied on the example of the Republic of Tatarstan using the theory of three levels of digital inequality, which allows not only analyzing in detail the digital split in a particular region, but also considering the complex nature of this technological and social phenomenon. In the Republic of Tatarstan, which pays great attention to digital technology and innovation, the digital divide is at a fairly low border. This is indicated by data on the development level of the information society in Tatarstan, the growth of fixed high-speed Internet access in the republic and mobile communications, the high popularity of electronic services in the republic, the active work of e-government and other factors. An important role was also played by the federal program on elimination digital inequality, as a result of which the Internet and digital technologies became available to citizens of Tatarstan, regardless of the settlement area. At the same time, there are rather low indicators of the digital literacy index, as well as the Internet openness index of the Republic of Tatarstan in comparison with other regions. Testing an integrated approach to the consideration of digital inequality in the Republic of Tatarstan using the theory of three levels of digital inequality will make it possible to use this approach in the study of other regions of Russia and the preparation of a comprehensive comparative analysis of the digital divide on an inter-regional scale, the relevance of which, in our opinion, is high today.

Key words: media resource, information space, digital technologies, electronic services, national media.

1. INTRODUCTION

The problem of digital divide (digital inequality, digital gap) is an important problem in the development of modern society. This problem has become the subject of multidisciplinary study, including various fields of knowledge. Many aspects of uneven access to the Internet and digital technologies are contained in the works of van Dijk [1, 2], M. Castells [3, 4], P. Norris [5], E.Hargittai [6], E.L. Vartanova [7], O. V. Smirnova [8, 9], C. Sparks [10], H. Nieminen [11], L. Rainie [12], M. Ragnedda [13, 14] et al.

An inherent feature of modern studies of the digital divide is the interest in the manifestation of inequality in various national contexts. Different levels of economic

development of countries and regions of the world, geopolitical, sociocultural features, specific nature of state regulation and media policy, linguistic and ethnic composition of the population, and other factors can affect both the level of citizens' access to digital technologies and resources. Therefore, the study of this problem in the regional and national aspects in such a multinational country as Russia is of particular interest. This article examines the problem of digital inequality in the Republic of Tatarstan in the light of the functioning of media resources. In our opinion, such a study will allow finding ways to solve problems to identify the most acute problems of digital development at the regional level, to expand the understanding of digital inequality in Russia as a whole. Finally, it seems interesting to analyze the experience of Russian regions in overcoming the digital divide, which can be used to optimize various regional and federal digitalization programs.

2. METHODS

In studying the specific nature of digital inequality at the geographic level, we relied on the theory of three levels of digital inequality. This theory has received rather detailed coverage in the foreign scientific community as a comprehensive theoretical approach to the study of the digital divide in the works of Attewell [15], Gunkel [16], Hargittai [6], Ragnedda [13, 14], van Dijk [1, 2], van Deursen & van Dijk [17], Warschauer [18]. However, it is rarely mentioned in Russian scientific practice (see, for example, Asochakov [19], Volchenko [20]). The emphasis in the publications of Russian researchers is most often made on one or two levels of the digital divide (most often the first and/or second), and there are almost no references to the theory of three levels. We tried to fill this gap by examining the specific nature of the digital divide in Tatarstan at all three levels and making conclusions about the prospects for overcoming the digital divide in the republic in the coming years.

3. RESULTS AND DISCUSSION

The Republic of Tatarstan is one of the Russian leaders in many respects. The republic is regularly ranked among the leading regions of Russia in terms of socio-economic development. Tatarstan is one of the most dynamically developing regions of Russia in the field of digital technologies and innovations. The government services and services in digital format are widespread in the republic. Tatarstan was chosen to test a pilot project on compiling the Internet openness index of Russian regions in 2017, testing the level of readiness of the regions to switch to digital interaction between the state, society and business, which also makes it a unique region of Russia to some extent.

Digital inequality can manifest itself at three main levels: 1) access level to the Internet and information technology; 2) level of digital competencies of users and digital literacy; and 3) level of social benefits that users receive with the competent and full use of digital technologies in professional and private life.

The first level of digital inequality is traditionally associated with the presence or absence of basic access to the Internet, digital technologies, media and communications infrastructure for citizens, which in turn determines whether citizens have access to information obtained through these technologies. According to the indicator "the number of Internet users per 100 people of population", the Republic of Tatarstan occupies fourth place among the subjects of the Russian Federation (along with a

number of other regions) and first place in the Volga Federal District [21]; according to the number of subscribers of mobile broadband Internet access per 100 people of population - 18th place among the subjects of the Russian Federation and third place among the subjects of the Volga Federal District [22]; according to the indicator “penetration of mobile radiotelephone (cellular) communication per 100 people of population” - 29th place among the subjects of the Russian Federation and fifth place in the Volga Federal District [ibid.]. The number of Internet subscribers increased by 1.7 times in the period from 2013 to 2018 in Tatarstan and is more than 4.3 million people with a total population of 3.8 million people today. The most popular among the population is the mobile Internet, the number of subscribers of which exceeded the mark of 3.3 million people. It is three times higher than the number of fixed broadband subscribers [23]. It should be noted that the number of mobile Internet subscribers in the republic has almost doubled since 2012. It indicates the availability of tariffs, improved cellular coverage, as well as the sufficiency of Internet access speeds compared to fixed access. In many respects, this was also facilitated by the introduction of new 3G and 4G communication standards in the republic and test of 5G capabilities in Innopolis and Kazan in 2018.

A significant contribution to overcoming the first level digital inequality in Tatarstan was made by the federal program to eliminate digital inequality, implemented in Russia since 2014. As part of the program, the republican universal operator Tattelcom prepared the communication infrastructure and installed 676 Internet access points at a speed of at least 10 Mbps in small rural settlements of the Republic of Tatarstan with a population from 250 to 500 people.

Taking into account the above, we consider it appropriate to say that the first-level digital inequality in Tatarstan is at the minimum possible border.

In contrast to digital inequality of the first level, where the key issue is the presence or absence of access to the Internet, digital technologies, inequality of the second level has a more complex nature. Just having access to the Internet does not guarantee that citizens will actually use it. In practice, the lack of digital skills and digital literacy “disconnects” users from the global information space even when solving the access problem and deepens the digital divide, moving it to the inequality level between those who use information and communication technologies, but do it with greater or lesser efficiency.

To analyze the second level of digital inequality in the Republic of Tatarstan, we turned to the digital literacy index, measured for various federal districts of Russia since 2015. According to research, the Volga Federal District, which includes the Republic of Tatarstan, is significantly inferior to a number of federal districts of Russia in terms of digital literacy. Thus, in 2017, the overall level of digital literacy in the Volga Federal District amounted to 4.42 points on a ten-point scale (for comparison, this indicator was 6.41 points in the Central Federal District; 5.95 point - in the North-West; 5.07 points - in the Ural; 5.03 points - in the Siberian) [24]. However, the Volga Federal District has significantly improved its digital literacy rate and has moved from the penultimate to fifth place in Russia for 2016-2017. The data on the Internet openness index of the Republic of Tatarstan (4.53 points on a ten-point scale at the time of research in 2017), in a sense, are correlated with the data on the digital literacy index. A quarter of the respondents in Tatarstan have never used the Internet, and just under 40% have never used public online services for personal purposes in the last year [25,30,31].

One of the important indicators of digital literacy of the population is also an active visit to media sites, social networks to obtain timely and relevant information, as well as the active functioning of the media themselves in social networks, the success of which depends not only on the number of subscribers in communities, but on the number of active users [26,29,34,35]. It is they who, through “likes”, reposts, and comments, create liveliness in the communities. For the successful organization of work in social networks, the editorial office shall promptly respond to user messages, answer their questions and criticism. It is this kind of bilateral dialogue that helps to increase the audience.

One of the most positive changes in the field of national media sphere that are under the influence of globalization and digitalization is their active positioning on the Internet. An urgent task in the development of modern media is their promotion in the networks through multimedia and content conversion for different types of media. It is especially interesting to observe the digitalization trend of traditional media in the system of national publications.

Unfortunately, some equality is also observed here. For example, traditional publications in the Tatar language do not fully take advantage of social networks and work poorly enough to attract readers to the online version of materials. Most of them have just begun to master the digital environment and do not show resourcefulness when distributing content on the Internet, including on social networks. As a result, most readers of Tatar-language publications continue to write out paper versions of publications (the most popular publications, such as “Акчарлак” (“Чайка”), “Безнең гәжит” (“Nasha gazeta”), “Ирек мәйданы” (“Ploshchad svobody”) continue to receive 30-40 thousand readers over the past six months). For the well-being of the editorial offices, this is also a positive indicator; however, this indicates a rather low digital literacy, primarily of the rural population of Tatarstan.

The danger of widening the digital divide is had also buy the widespread transition of television broadcasting from analogue to digital format. For example, the fate of municipal, city and district television companies in cable networks on the 22nd button, the fate of regional television in the framework of the development of digital terrestrial television and the short life of regional television in analogue broadcasting. As stated by the Director General of the New Century shopping center Ilshat Aminov: There are no “digital” regions and “analogue” has almost disappeared; coverage of regional press is decreasing, high-speed Internet penetration in the region is a maximum of 30 percent of the population. There are only regional tie-ins in VGTRK. He especially emphasized the national aspect of the problem: there is no television channel broadcasting in the native language in the set of digital terrestrial television. If there is no television in the native language, then how the authorities should “communicate” with their people? “Digital terrestrial television was designed to reduce information inequality. But, unfortunately, it creates economic inequality, when the viewer shall pay for watching the TV channel in his/her native language”, the head of the television and radio company said [27,28,32,33].

Based on these data, it can be assumed that the digital inequality of the second level is a rather important problem in the Republic of Tatarstan. In our opinion, the relevant task is the active implementation of state policy in the field of support of state languages and at the level of digital technologies.

As for the third level of digital inequality, which takes into account the degree of social benefits that users get when they use the digital technologies correctly and

professionally and in private, we can say that this level of digital inequality has been successfully overcome today in the Republic of Tatarstan. The Portal of State and Municipal Services is also widely used in the republic. It is maximally adapted to the needs of local residents and offers access to 248 electronic services. More than 2.2 million user accounts are registered on the Portal. The Portal is in demand among 92% of the working population of the republic. Over the period from January to September 2018, residents of the republic received more than 133 million electronic services - 72% more than in the same period in 2017. The popularity of such services indicates the involvement of the majority of citizens in the work of state and public institutions, which in turn suggests that there is no significant gap at the third level of digital inequality in Tatarstan.

4. SUMMARY

Within this article, we attempted to look at the problem of digital inequality in the Republic of Tatarstan using the theory of three levels of digital inequality, which allows not only analyzing in detail the digital split in a particular region, but also considering the complex nature of this technological and social phenomenon. Tatarstan pays great attention to digital technology and innovation. Therefore, the digital divide is at a sufficiently low boundary. This is indicated by data on the development level of the information society in Tatarstan, the growth of fixed high-speed Internet access in the republic and mobile communications, the high popularity of electronic services in the republic, the active work of e-government and other factors. An important role was also played by the federal program to eliminate the digital divide. As a result, the Internet and digital technologies have become available to citizens of Tatarstan, regardless of the settlement area.

In this context, the rather low indicators of the digital literacy index of the Volga Federal District, as well as the Internet openness index of the Republic of Tatarstan, seem somewhat ambiguous to us. This requires the development of additional regional digital literacy programs for users. A rather important problem in the Republic of Tatarstan is the digital inequality in the field of mass media. In this regard, in our opinion, the relevant task is the active implementation of state policy in the field of support of state languages and at the level of digital technologies in mass media.

5. CONCLUSIONS

Thus, the digital divide is a complex and multidimensional phenomenon. Talking about it only as the presence or absence of access to the Internet today is not entirely correct. Researchers are paying more and more attention to the relationship between digital and social inequality, the impact of the absence of a digital space on a person's position in society, his/her ability for self-realization and more active participation in society today. We hope that the study of digital inequality in the Republic of Tatarstan using the theory of three levels of digital inequality will allow using this approach in the study of other regions of Russia in terms of digital space acquisition.

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