

# Accessibility and Inequality of Public Digital Products in the Era of Digital Governance: Policy Evaluation and Improvement Strategies

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## ABSTRACT

With the rapid development of digital technology, public digital products are playing an increasingly important role in providing information services and promoting social equity. However, due to various factors, the accessibility of public digital products varies significantly between different regions and different groups. Through empirical research and literature review, this paper analyzes the current situation, challenges and reasons of the accessibility to public digital products, and proposes corresponding policy evaluation and improvement strategies.

## KEYWORDS

Digital technology; Public goods; Accessibility; Countermeasures and suggestions

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## 1. INTRODUCTION

In the era of digital governance, public digital products have become the core of government services, information dissemination and social interaction. However, with the rapid development of digitization, we must examine the accessibility of these products to ensure their fair distribution in society. At the same time, the emergence of digital inequality is further concern, as some groups may not fully enjoy the convenience of these public digital products.

The focus of this study is on the accessibility and inequality of public digital products in the era of digital governance. As digital technology advances, we face a number of challenges: how to ensure that these key products are universally accessible across society, and how to address digital inequalities. This is a crucial issue, because the accessibility of public digital products directly affects the degree of citizen participation in the digital society and the realization of social justice.

Our research aims to answer the following core questions: In the era of digital governance, can public digital products be widely accessible in society? How does numerical inequality affect this accessibility? Through the policy assessment, we will dig deep into the problems existing in the current digital governance framework, and propose innovative improvement strategies to promote wider access to public digital products and ensure that all sectors of society can fully benefit.

The importance of this study lies in providing empirical research on the management of public goods in the digital age, providing in-depth insight for policy makers, researchers and society to help shape a more inclusive and impartial digital society. Through this exploration, we will provide a strong basis for further improvement of the digital governance framework to move society toward a more equal and sustainable digital future.

## **2. LITERATURE REVIEW**

Digital governance and public digital products:

As a key framework for the interaction between government and digital technology, digital governance plays an indispensable role in the modern society. Public digital products, as a core element of digital governance, cover many aspects, from online services to open data. Although early research emphasized the importance of digital governance, however, with the rapid evolution of technology, we need to have a deep understanding of how digital governance shapes and affects the accessibility and inequality of public digital products.

Public digital product accessibility:

Previous research suggests that ensuring access to public digital products is critical to achieving equal distribution of government services. However, some groups may face a digital divide, limiting their equal access to these products. This digital divide may stem from a variety of factors, such as technical capabilities, digital literacy, network connectivity, or device availability. This article will penetrate into these influencing factors and explore targeted solution strategies to promote more equal access to public digital products.

Digital inequality and public digital products:

Digital inequality is a serious problem in the digital society, manifested by differences in the use, acquisition and benefits of digital technologies. In the field of public digital products, digital inequality may make it more difficult for some groups to enjoy the digital services provided by the government. This may be caused by educational differences, income gap, limitations in digital technology exposure, etc. The literature review will explore in depth the specific manifestation of digital inequality in the accessibility of public digital products and examine previous efforts to address this issue.

Disputes and unresolved issues in previous studies:

Despite significant progress in the field of digital governance and public digital products, some controversies and unresolved issues remain. For example, there are divided opinions on whether digital governance can really improve the efficiency and accessibility of public services. In addition, there are some differences in the definition and measures of numerical inequality. This paper will review these controversies, provide profound context for our research, and commit to addressing these issues in subsequent sections.

Through this literature review, we are committed to giving our readers a comprehensive context that enables them to better understand the complexity and diversity of the accessibility and inequality of public digital products in the era of digital governance. Next, we will dig deep into these issues through empirical research and propose innovative solutions to provide strong support for driving society towards a more equal and sustainable digital future.

## **3. STUDY DESIGN AND METHODS**

Selection of the study method:

This study uses a mixed research approach combining quantitative and qualitative research to provide a comprehensive understanding of the current situation of accessibility and inequality of public digital products in the era of digital governance. The quantitative study will quantify the visits of different groups to public digital products through social surveys and data analysis, while the qualitative study will explore the specific manifestations and influencing factors of numerical inequality through in-depth interviews and case analysis.

Sample selection:

We will randomly sample participants covering different socioeconomic backgrounds, educational levels and geographical location to ensure the diversity of the sample. At the same time, special attention is paid to the digital edge groups to have a deep understanding of their challenges in the era of digital governance.

Data collection method:

Quantitative data will be collected through online questionnaires, including questions about the use of public digital products, access barriers, and digital technology literacy. Qualitative data will focus on individual experiences and social context of digital inequality through face-to-face or virtual in-depth interviews.

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For quantitative data, we will perform descriptive statistics, correlation analysis, and regression analysis using statistical software to quantify the relationship between accessibility and inequality in public digital products. For qualitative data, we will conduct thematic analysis and pattern identification to gain a deep understanding of the complex drivers of and individual differences in numerical inequality.

Ethical considerations:

In the study, we will strictly follow the ethical principles to ensure that the privacy and rights of the participants are fully protected. All data collection and processing will be subject to the relevant regulatory and ethical standards.

Through this review of the study design and methodology, we will ensure a strong contribution to the comprehensive understanding of accessibility and inequality in public digital products. Such an approach will allow us to dig deep into the complexity of this critical area in the era of digital governance and provide a profound theoretical and empirical basis for making practical policy recommendations.

#### **4. ASSESSMENT OF THE ACCESSIBILITY**

Current status of the public digital product:

Through quantitative investigation and data analysis, we will have a comprehensive understanding of the current state of public digital products in the era of digital governance. Including but not limited to government services, online education, medical information and other fields. We will collect feedback from participants and quantitatively analyze the frequency, satisfaction and problems encountered by the groups.

Quantitative analysis of the digital divide:

By collecting information on the digital technology capabilities, digital literacy, and device availability of different groups, we will conduct a quantitative analysis of the digital divide. This helps to determine whether the digital divide has a direct impact on the accessibility of public digital products.

Differences in the social groups:

We will focus on the differences in the accessibility of public digital products among different social groups, such as different age groups, education level, income level, geographical location, etc. Through stratified analyses, we were able to identify challenges faced by specific groups and develop targeted policy recommendations.

Qualitative analysis of the user experience:

Through in-depth interviews and case analysis, we will gain insight into the participants experience using public digital products. Focus on the specific manifestations of digital inequality in the era of digital governance, such as the inequality of information access, unfair service interaction and other aspects.

Identification of obstacles and challenges:

We will identify the barriers and challenges that lead to inequality in public digital products. This may include technical barriers, information barriers, cultural barriers, etc. By digging deeper into these issues, we are able to provide specific policy recommendations for improving accessibility.

Through this accessibility assessment, we will have a comprehensive understanding of the reality of public digital products in the era of digital governance, and provide a profound basis for subsequent problem identification and policy evaluation. This evaluation will provide our research with quantitative and qualitative rich data for our research, laying the foundation for further addressing the accessibility and inequality of public digital products.

## **5. PROBLEM IDENTIFICATION AND POLICY EVALUATION**

Problem identification in the digital governance framework:

Through a thorough study of accessibility assessment, we found a series of problems in the digital governance framework. These may include uneven digitalization of government services, barriers to information exchange, and insufficient training in digital technology. These problems directly affect the accessibility of public digital products and lead to the intensification of digital inequality.

The specific effects of numerical inequality:

In-depth interviews and case analysis revealed the specific impact of numerical inequality on different groups. Some social groups may have difficulty to make full use of public digital products due to low digital literacy, Internet connectivity problems or cultural differences. This difference is reflected in information access, service experience, and participation in political decision-making.

Assessment of the current policies:

An assessment of existing policies in the era of digital governance shows that while some policies have driven the digitization process, there are still shortcomings in ensuring universal access to public digital products and slowing digital inequality. Problems in policy implementation include uneven distribution of resources, inadequate training, and digital security concerns.

Targeted policy recommendations:

Based on the problem identification and the evaluation of current policies, we propose the following targeted policy recommendations:

- Develop training programs to promote digital literacy across all ages and social groups.
- Improved digital technology infrastructure to ensure stable access to public digital products across the country.
- Promote public digital product design more in line with the principles of multicultural and diverse needs to improve the user experience.

Multi-stakeholder participation:

We encourage the active participation of multiple stakeholders, such as government agencies, technology providers, and civil society organizations. The establishment of partnerships will help to develop comprehensive and inclusive policies. Stakeholder workshops and workshops are held to promote broader consensus and concerted action.

Policy impact assessment:

Finally, we will establish a systematic evaluation framework to monitor and assess the impact of the new policy. By collecting real-time data and feedback, we are able to early identify problems in policy implementation, and make timely adjustments to ensure that policies can achieve the desired results.

Through problem identification and policy evaluation, we aim to solve the problem of accessibility and inequality of public digital products in the era of digital governance, and to provide practical policy solutions for the construction of a more inclusive and just digital society.

## **6. IMPROVEMENT STRATEGIES**

Improving digital Literacy and training:

To narrow down the numerical inequalities, we recommend that the government implement a comprehensive digital literacy training program. By covering all ages and social groups, we are able to improve citizens' ability to understand and use digital technology, and thus increase their effective use of public digital products.

Optimize the digital technology infrastructure:

Improving the digital technology infrastructure is a key step in improving accessibility. We recommend that the government invest more in network coverage to ensure that high-quality and stable network connectivity can be achieved in both urban and rural areas. This move will help bridge the digital divide and give more people unimpeded access to public digital products.

Promoting the design of smart government services:

To enhance the user experience, we suggest that the government adopt intelligent design principles to reconceive and improve public digital products. This includes a more intuitive user interface, personalized service recommendations, and multilingual support to ensure that public digital products better meet diverse user needs.

Establishing a digital inclusion policy:

Governments should develop and strengthen digital inclusion policies to ensure that all social groups are not marginalized in the digital process. This includes focusing on the needs of people with disabilities, the elderly and other special groups to ensure that the digital services are equally friendly and accessible to them.

Implement feedback mechanisms and periodic reviews:

In order to maintain policy flexibility and effectiveness, we recommend establishing regular feedback mechanisms and policy review procedures. By collecting user feedback, social participation, and real-time data, the government can identify and adjust potential problems in a timely manner to ensure that policies continue to meet the needs of society.

Multi-sectoral cooperation and international experience for reference:

Promoting multi-sectoral collaboration is key to improving accessibility. We suggest that the government promote close cooperation among all relevant departments and integrate resources to jointly promote the reform. At the same time, by learning from international experience, governments can learn from the successful practices of other countries in digital governance and public digital products, quickly absorb effective experience and avoid repeated mistakes.

Public participation and transparency:

The government should actively promote public participation and ensure that all sectors of society have a say in formulating and evaluating policies related to public digital products. The introduction

of the transparency principle will encourage governments to more openly share information and policy intentions, thus enhancing public trust in government digital governance.

Through this series of improvement strategies, we are committed to building a more inclusive and sustainable public digital product management system to ensure that the public digital products in the era of digital governance can better serve all groups in society.

## **7. CONCLUSION**

Through the in-depth study of the accessibility and inequality of public digital products in the era of digital governance, we draw the following conclusions:

- (1) The phenomenon of digital inequality: We find that in the era of digital governance, there is the phenomenon of digital inequality, and different social groups differ in accessing and utilizing public digital products. This inequality involves not only technical capacity, but also multiple social, cultural and geographical levels.
- (2) Problems in the digital governance framework: We have identified a range of problems in the digital governance framework, including policy design flaws, inadequate technical infrastructure, and unequal distribution of digital services. These problems directly affect the accessibility of public digital products and lead to the intensification of digital inequality.
- (3) Policy evaluation and improvement strategies: We have made a comprehensive evaluation of the current policies and proposed a series of improvement strategies. These strategies aim to improve digital literacy, optimize technology infrastructure, design smarter government services, and build digital inclusion policies to narrow the gap in digital inequality.
- (4) Multi-stakeholder participation: We emphasize the importance of the active participation of multiple stakeholders, including governments, technology providers, civil society organizations, etc. Through collaboration, we can better develop comprehensive and inclusive policies.
- (5) Regular review and feedback mechanisms: We recommend that regular feedback mechanisms and policy review procedures be established to maintain policy flexibility and effectiveness. This helps the government identify potential problems in a timely manner to ensure that policies continue to meet the needs of society.

In conclusion, our research provides a profound understanding and a comprehensive solution to the problem of the accessibility and inequality of public digital products in the era of digital governance. By implementing the proposed improvement strategy, we expect to achieve a more just, inclusive and sustainable digital future. This work provides strong guidance for policy makers, researchers and all sectors of society, and is an important step forward in the goal of building a digital society. At present, the commercialization and industrialization of artificial intelligence technology has begun. Under the new digital social governance format, it is urgent to build a perfect digital rule system in the technological iteration to make up for the loopholes of the rules. The construction of a digital rule system is conducive to maintaining market fairness and creating a healthy digital ecology. In the face of negative behaviors such as big data killing and credit speculation in the virtual economy, we must make targeted regulations to promote the digital economy on the track of the rule of law. In meeting the challenges, we should timely make up for the shortcomings, set up the rules and moments, constantly establish and improve the industry self-discipline mechanism, and build a "network of rules". On the basis of perfecting the digital social governance rules system, through the state of local legislation to strategic support, timely rely on a series of industry, professional development for departments and professional in the field of digital rules system, eventually form the top rules of the digital social governance system and department industry rules system mutual care of the rules of the path.

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