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Research on Countermeasures and Suggestions for Investing in Human Capital in Digital Society Construction

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Abstract: The digital society, as a manifestation of comprehensive modernization, has become a key driving force in various fields. China has made remarkable achievements in digital social construction, but it still faces challenges like uneven distribution of digital resources and skill disparities. Investing in the digital capabilities and literacy of individuals is foundational for ensuring social equity and efficiency. This paper systematically reviews the background and issues of digital social construction, analyzes the core importance of investing in people, and proposes strategies such as the popularization of digital skills, enhancement of human health capital, and incentivization of social capital. Emphasizing the establishment of a scientific evaluation system and a multi-stakeholder collaboration mechanism is crucial for promoting resource sharing and collaborative governance. In summary, the people-centered development approach is the fundamental guarantee for sustainable and high-quality development of the digital society. The future should integrate technological, policy, and industrial advancements to further energize digital governance.

Keywords: Digital society construction; Investment in people; Digital capability; Digital literacy; Social equity

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1. Introduction

As a comprehensive manifestation of the digitalization of modern society, the digital society has become a key driver of development across the economy, politics, culture, society, and ecology. Against the backdrop of global digital transformation, the digital society is not a mere accumulation of technologies but a social form integrating new concepts, models, and mechanisms—one that has profoundly transformed people's daily lives and social structures, particularly demonstrating significant innovation and transformative power in education, government governance, economic development, and public services [1].

Promoting digital society construction requires not only the widespread application of cutting-edge technologies but, more importantly, investment in people's digital capabilities and literacy—an essential

foundation for the full participation and equitable development of all social members. Digital literacy serves as a critical means to narrow the digital divide and promote digital inclusion, facilitating the sharing of digital dividends among all people, advancing the formation of digital citizenship awareness, and thereby strengthening the social and institutional underpinnings of digital society construction. Digital technologies have become increasingly valuable in health, education, and urban-rural governance; investment in people not only enhances human capital quality but also provides new momentum and innovative impetus for economic development [2].

China has achieved remarkable progress in digital society construction to date, with breakthroughs in policies, technologies, and applications. However, challenges remain, including the unbalanced distribution of digital resources and significant disparities in digital skills. The imbalance in urban-rural digital governance hinders the achievement of common prosperity, while the digital transformation of fields such as higher continuing education urgently requires enhanced professional management and platform development to adapt to the new context. Against this backdrop, deepening the strategy of investing in people, strengthening digital education, training, and support services, and improving digital infrastructure will be key to addressing practical bottlenecks, promoting social equity, and boosting efficiency.

This study aims to systematically clarify the background and theoretical basis of digital society construction, focusing on analyzing the core role of investing in people in the digital society and the associated challenges, and proposing practical countermeasures by drawing on domestic and international experience. It is hoped that scientific and rational investment planning will promote the widespread improvement of digital literacy, advance the balanced sharing of digital resources, and facilitate the high-quality development of digital society construction. The digital society is not a closed system but an open ecosystem centered on people and integrating multi-field, multi-dimensional development; investing in people's digital capabilities is the cornerstone and guarantee for realizing this ecological function.

2. Background and current situation of digital society construction

Digital society construction centers on the in-depth integration and application of digital technologies, driving the comprehensive digital transformation of the economy, politics, culture, society, and other fields. National policies such as the Digital China Strategy and digital government construction reflect high-level national attention to digital social development, regarding it as a key engine for improving national governance efficiency and international competitiveness. Zhejiang's "Digital Zhejiang" initiative, as an important model for Digital China construction, has actively promoted the development of digital society nationwide, embodying the trend of coordinated promotion of digital economy and digital governance innovation between local and central governments.

Global digital government construction presents an unbalanced pattern: developed countries in Europe and America generally lead in digital infrastructure, service scale, and quality, while developing countries lag behind due to economic, technological, and talent constraints. Such disparities exist not only between countries but also within nations. As a promoter of digital society construction, China has demonstrated a unique path in its overall development—while extensively advancing digital government and digital economy, it has also formed diversified and characteristic digital service platforms based on the characteristics of different regions and industries to meet complex and multi-level practical needs [3].

As one of the core elements of digital society construction, digital literacy directly affects the popularization and application of digital technologies. 2022 survey data in China shows that less than half of respondents possess the ability to use digital tools to solve problems, indicating that the popularization of digital skills and digital inclusion still needs improvement. Improving digital literacy is not only key to promoting universal participation in digital society construction but also a necessary condition for narrowing the digital divide and enhancing the equalization of public services. The promotion of digital inclusion policies helps different regions and social groups equally enjoy the convenience brought by the digital society, thereby promoting the overall coordination of social governance and economic development [4].

In the fields of digital government and digital economy, especially among countries along the "Belt and Road", significant disparities in digital infrastructure, talents, and application capabilities are also prominent. Developed countries and regions such as Singapore and some Central and Eastern European countries have active digital economy development and strong talent reserves and innovation capabilities; in contrast, some underdeveloped countries and regions face challenges such as weak network infrastructure, limited technology, and insufficient talent, forming an obvious "digital divide." This polarization not only restricts cross-border digital industry cooperation but also poses a severe test to the balanced development of regional economies [5].

At the domestic level, there are significant differences in digital infrastructure and investment intensity across regions in China. Coastal developed provinces have achieved a high level of digital government and digital library construction, while inland and remote areas are relatively backward in digitalization due to historical foundations and resource constraints. Taking socialist colleges as an example, central-level socialist colleges have established standardized digital resource systems, while most local socialist colleges are still in the initial stage of insufficient digital resources [6]. This unbalanced development reflects the need for targeted policies in China's digital society construction to achieve inter-regional resource sharing and capacity improvement, and promote the fair and balanced development of the digital society [7].

3. Importance of investing in people and analysis of existing problems

In the construction of a digital society, the core significance of investing in people lies not only in improving individuals' digital skills and literacy but also in activating the overall digital governance capacity of society and promoting in-depth integration of technology and society. The widespread application of digital technologies such as big data, artificial intelligence, and 5G has raised higher requirements for talents, who are not only technical experts but also managerial and interdisciplinary talents with cross-border capabilities in digital governance, information security, and data analysis. Currently, the shortage of digital talents has become a key bottleneck restricting digital society construction, slowing down the application of informatization in related fields, especially the grass-roots community and rural governance, and hindering the implementation and sustainable development of digital policies [8].

Digital social governance is complex and multi-dimensional; the risks brought by talent shortages not only affect technological application but also trigger issues such as data security hazards, widened digital divide, and algorithmic discrimination. These challenges have, to a certain extent, constrained the development of digital inclusion; in particular, the insufficient digital infrastructure and capabilities in remote and economically underdeveloped areas make it difficult to achieve the inclusiveness of digital services. Beyond technological construction, the balanced allocation of social resources—including human, material, and financial resources

for digital technology application—needs more attention. Such resource shortages lead to weak community digital governance capacity and insufficient residents' digital literacy, forming a "disconnection" in technological application and affecting the fairness of residents' access to digital dividends [8].

At present, there are still problems of "superficial digitalization" and "focusing on digital technologies while ignoring people" in the construction of a digital society centered on investing in people. Some regions prioritize hardware facilities and technological deployment in digital platform construction but neglect talent training and service model innovation, resulting in low platform utilization, difficult data sharing, and inconsistent management processes. The phenomena of redundant construction and incompatible standards are particularly prominent, leading to serious waste of digital resources and underutilization of digital asset value. In digital governance, governments need to rationalize institutional mechanisms and build collaborative governance platforms to achieve effective connection among multiple departments and levels, thereby improving the overall efficiency of digital governance and realizing the transformation from grid management to grid governance [9].

In terms of talent training, in addition to technical skills training, the update of thinking modes and governance concepts cannot be ignored. The digital society emphasizes multi-subject participation, requiring citizens to have certain information identification capabilities and digital participation awareness. The frequent occurrence of social issues such as cyberbullying and information security highlights the urgent need to improve public digital literacy [10]. Furthermore, to address problems such as insufficient data supervision and platform monopoly, the training of interdisciplinary talents urgently needs to integrate knowledge from multiple fields such as law, ethics, and sociology to realize the prediction and effective response to digital risks [11].

Looking ahead, improving the mechanism of investing in people is key to promoting the sustainable development of the digital society. A collaborative talent training system integrating industry, academia, research, and application should be established, and the coverage and depth of digital education and training should be expanded, especially by increasing investment in remote and disadvantaged areas to improve the overall digital literacy of the whole people. It is necessary to strengthen the career development paths and incentive mechanisms for digital governance talents to ensure equal emphasis on technological innovation and governance innovation. Through the rational integration and optimal allocation of digital social resources, a virtuous cycle of technology, talents, and systems can be truly realized, solving the structural problems in digital social development and promoting the digital society towards more fairness, efficiency, and security [9].

In summary, the inherent value of investing in people runs through every link of digital society construction. While technological infrastructure is the foundation, talents and social resources are the cornerstone of the vitality of the digital society. Only by fully recognizing the dual reality of talent shortages and digital governance challenges can scientific and effective investment strategies be formulated to promote the modernization transformation of the digital society and better serve the people's needs for a better life.

4. Countermeasures and enlightenment of digital society construction at home and abroad

Diverse international practices in digital society construction provide valuable enlightenment. Developed economies represented by the United States and European countries have demonstrated robust systematic planning and sustained investment in digital governance, digital infrastructure, and digital talent training.

They leverage information and communication technologies (ICT) to enhance government governance capacity and public service quality, driving comprehensive digital transformation of society and economy. The development of U.S. digital government has evolved from technological innovation to new technology application, and then to enhanced international competitiveness, emphasizing the close integration of information infrastructure construction and technological environment optimization to form a sound digital ecosystem. Europe, by fostering a high-level digital education ecosystem, focuses on digital skills training and citizens' digital literacy improvement to cultivate interdisciplinary talents adaptable to the digital economy, providing social support [10]. These practices reflect the multi-dimensional goals of digital society construction: integrating improved governance efficiency, economic development, and social inclusion [10].

As a model of digital governance and smart city construction in Asia, Singapore's experience emphasizes the integrated development of informatization and digital governance. By integrating innovative technologies with public management systems and establishing efficient digital government service platforms, it has not only improved urban management but also enhanced the intelligence and precision of social governance. Singapore's case reveals that digital society construction is not only technology-driven but also a process of institutional innovation and organizational reform, highlighting that path selection should align with a country's actual socio-economic development and governance needs. Drawing on this insight, the advancement of digital society must balance technological development and institutional coordination to ensure digital technologies truly serve the realization of public value [12].

In contrast, China has experienced rapid growth in digital government construction and digital social development, with its e-government index rising significantly to the "very high" level, demonstrating strong policy driving force and technological integration capacity. From the regional practice of "Digital Zhejiang" to the national digital rural strategy, these breakthroughs highlight the profound impact of digital technologies on social governance and public services [13]. China's Digital China development path combines top-level design with local innovation, continuously addressing technological shortcomings, advancing digital infrastructure construction, and prioritizing digital talent training and social digital literacy improvement—all of which help shape a sound digital social ecosystem and promote social equity and inclusive development.

International comparisons of digital society construction show that technological development and governance capacity improvement must proceed in tandem, with institutional design and talent training being indispensable. Digital literacy and digital labor literacy have become a common focus globally, as they are not only linked to the digital economy's development potential but also involve the protection of digital citizens' rights and interests and social participation [10]. Corresponding practical paths include improving digital infrastructure, promoting online-offline integrated service systems, deepening digital skills education, facilitating cross-departmental data sharing, and strengthening information security—core strategies for building a sustainable digital society. Meanwhile, countries and regions must design digital development strategies based on local socio-economic conditions and cultural differences to avoid exacerbating social inequality through the digital divide.

Therefore, domestic digital society construction should draw on foreign experience, integrate successful practices of digital governance and informatization improvement, and strengthen the coordinated promotion of technological innovation and talent training. Promoting institutional innovation, establishing a flexibly responsive digital policy framework, and optimizing resource allocation and management processes will serve as important pillars to accelerate digital society construction. Through this integrated development model, China can better respond to global digital competition, support high-quality development, achieve

in-depth reforms in the economic, social, and governance fields, and build a future-oriented new pattern of digital society.

5. Countermeasures and suggestions for implementing investment in people

The core of digital society construction lies in the all-round development and effective participation of people, and implementing people-oriented investment strategies is the fundamental guarantee for its sustainable and high-quality development. The accumulation of digital capital, human health capital, and social capital is key to maximizing the public value of the digital society. By identifying people's diverse needs and role positioning in digital society construction, a systematic investment mechanism can be established to effectively improve individuals' digital literacy, health levels, and participation in social governance, thereby promoting the modernization of social governance and the equalization of public services [9].

First, priority should be given to popularizing and improving digital capabilities and access. To address the digital divide among different groups, governments should increase investment in digital infrastructure and technical training in remote areas and for vulnerable groups, ensuring their basic digital access and capabilities. This includes not only the supply of hardware facilities but also the improvement of digital skills, covering operational capabilities, network security awareness, and the learning of innovative digital applications. Enhanced digital capital promotes the effective sharing of information resources and value co-creation, driving individuals' active participation in tourism, education, medical care, and other fields, and further fostering vitality and innovation in the digital society [14].

As an important part of people's basic capabilities, human health capital needs to be dynamically improved through the improvement of digital medical care and health services. Digital technologies have shown significant effects in reducing mortality rates and extending healthy life expectancy, especially among high-income groups. To address health gaps and inequalities, governments should encourage and guide the digitalization of medical resources, promote the standardization and sharing of medical images, telediagnosis, and health records, and realize precision medicine and health management. Meanwhile, the construction of medical service alliances and digital health platforms should focus on multi-party coordination to overcome technical differences and data security issues, ensuring the high-quality development and equitable access to health services [15].

Social capital in digital society construction is also indispensable, and an incentive and coordination mechanism should be built to enhance the public's participation enthusiasm and capabilities. Through government leadership and the linkage of social organizations, the public can be promoted to participate in social governance, supervision, and public value creation, forming a virtuous cycle where a proactive government and a dynamic society promote each other. Governments should play a leading role, clarify the direction and norms of digital social governance, provide resources and institutional guarantees, promote the digital capacity building of social organizations, and improve the public's digital governance level. At the same time, stimulate residents' participation enthusiasm and create a social atmosphere where everyone participates in digital governance.

To ensure the implementation of the above investment measures, a scientific and reasonable performance evaluation system must be established. This system should comprehensively assess the coverage, service efficiency, user satisfaction, and social impact of investment projects through a combination of quantitative

indicators and qualitative feedback. Project investment should be linked to the improvement of people's daily quality of life and the simplification of administrative efficiency, and comprehensive evaluations of costs, progress, user experience, and social feedback should be conducted regularly to prevent resource waste and blind investment. This will drive the continuous optimization of digital society construction and accelerate the modernization of social governance.

In terms of the multi-subject collaboration mechanism, it is crucial to build a platform pattern involving governments, enterprises, social organizations, and the public. Governments should coordinate various digital subjects, promote the unification of technical standards, resource sharing, quality and safety management, and the integration of information circulation. Enterprises assume the responsibility of technology development and operation and maintenance, social organizations play a bridging role, and the public, as users and co-creators of digital public products, jointly promote the digital transformation and ethical responsibility of digital social governance, realizing the efficient flow and people-benefiting sharing of information resources. By clarifying the responsibilities and collaboration paths of all parties, the systematic and inclusive development of digital society construction is guaranteed [9].

The following flow chart shows the main links and collaboration mechanisms of digital society construction, focusing on investment in people, reflecting the closed-loop process from government planning, enterprise technical support, social organization collaboration, to public participation (**Figure 1**).

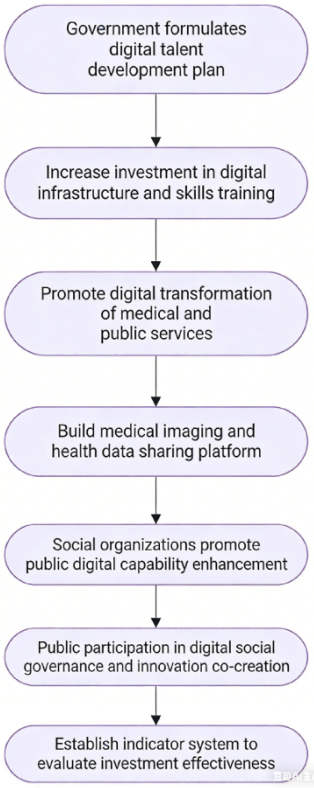

Figure 1. A closed-loop system framework for digital public service governance

Through the above multi-dimensional people-oriented investment strategies, digital society construction breaks away from the single technology-centered perspective and truly returns to the people-oriented

development concept. This not only improves people's digital living vitality and health levels but also builds a more fair, efficient, and sustainable digital governance ecosystem by activating the vitality of social governance. With the in-depth advancement of the Digital China Strategy, implementing people-oriented investment countermeasures will become a key measure to promote the high-quality development of the digital society.

6. Conclusion and outlook

As digital society construction enters a critical stage, the concept of investing in people has become pivotal to promoting high-quality social development. By exploring the mechanism of human capital improvement in the digital economy and analyzing the current situation and challenges of digital society construction, this study clarifies the strategic path centered on talent training and skill enhancement. Specifically, constructing a comprehensive training and education system led by digital skills to advance equitable development across urban-rural areas and social groups is crucial for narrowing the digital divide and achieving common prosperity. Notably, digital society construction extends beyond upgrading technical equipment and infrastructure; it also requires systematic investment in human capital, emphasizing innovations in talent introduction, training, and management mechanisms to further stimulate individuals' digital innovation and adaptability, thereby promoting the coordinated development of industrial structure upgrading and in-depth digital economy integration.

Building on domestic and international experience, strengthening the cultivation of digital literacy and interdisciplinary talents, as well as improving the training system for workers at different skill levels, is particularly critical to advancing this strategic path. Governments and enterprises should jointly shoulder the responsibility of human capital development in the digital era, establishing a continuous capacity improvement chain through academic education reform, vocational training, lifelong learning mechanisms, and incentives for in-house digital talents. Additionally, targeted digital skill support should be provided to underdeveloped areas and vulnerable groups, supplemented by improved social security mechanisms, to ensure that the benefits of digital development are shared by a broader spectrum of society.

Looking ahead, as digital society construction deepens across multiple dimensions, human capital investment strategies must be integrated with technological innovation, policy guidance, and industrial upgrading to sustain this progress. Policy formulation should adopt a long-term perspective, promoting the agglomeration of high-level talents, optimizing supporting public services, and breaking the constraints imposed by talent "crowding costs." Moreover, the growing application of digital technologies in social governance, economic development, and public services will further drive demand for multi-level talents. Sustained efforts to deepen the integration of digital human capital with economic and social structures are expected to build an internationally competitive innovation hub, realizing a fundamental shift from quantitative expansion to qualitative improvement and from following to leading [16].

Against this backdrop of deepening digital transformation, future research should focus on fostering digital talents' international perspectives and integrating global resources, exploring the dynamic interaction mechanism between the digital economy and human capital, and addressing the structural contradictions inherent in the digital divide. Furthermore, interdisciplinary integration and multi-departmental collaboration will help build a more open, inclusive, and effective talent development ecosystem, laying a solid foundation

for inclusive growth in the digital society. Ultimately, promoting people-oriented digital society construction remains an indispensable path toward comprehensive modernization, social equity, and sustainable development.

Disclosure statement

The authors declare no conflict of interest.

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