



Exploration on the Promotion Path of Digital Talent Construction in Public Administration Department

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Abstract. In recent years, the digital transformation of public administration has developed rapidly, but the corresponding digital talent team construction of public administration has been relatively slow. Digital talent cultivation generally faces double challenges of quantity and quality. Digital talents are scarce and reserves are seriously insufficient. Meanwhile, the digital ability level of talents is not high, and the systematic cultivation and construction of digital talent team is imminent. In view of this problem, this paper puts forward to construct the overall framework of digital talent team construction, clarify the training standards of digital talents, design the training system of digital talents planning, innovate the four-in-one digital talent construction promotion path of digital talents certification mode of public administration departments, and provide sustainable and reliable digital talent team for the digital transformation of public administration departments.

Keywords: Digital talent; Digital transformation of public administration; Kill chain; Talent development

1 Introduction

In the 19th CPC National Congress's report, it is pointed out that "talent is the first resource." With the advent of the digital age, digital public administration, e-government in the global scope of rapid expansion, in our country, the construction of digital government has been entrusted with the important mission of promoting the modernization of national governance ^[1]. Digital government not only changes the physical form of public administration, but also leads to the change of values, emphasizing the construction of service oriented, innovative and open public administration ^[2]. With the emergence of a large number of digital and intelligent posts in the public administration service department, the demand for digital talents in the public administration service department is increasing. Zhao Huiguang (2019) defines digital talents as individuals who master big data processing, data analysis and new technology application, and can lead digital transformation in various industries ^[3].

In recent years, the construction of digital government and e-government has developed rapidly, but the matching degree between the development scale of digital

government and the digital talent team has gradually decreased. Relevant studies have shown that the existing digital team of public administration departments can not adapt to the current business units of the information demand ^[4]. It is an important guarantee for the implementation and promotion of digital government to cultivate five digital talents in the digital transformation and talents first. At present, the digital transformation work of public administration departments generally faces the double challenges of quantity and quality in the cultivation of digital talents. Digital talents are scarce, the reserve is seriously insufficient, and the level of talents 'digital ability is not high. Therefore, it is urgent to train and construct digital talents team five systematically. Digital talent construction and training is a hot field of digital transformation research. Na Dandan and Li Ying (2021) proposed to strengthen the cultivation of high-end compound talents in the field of digital transformation ^[5]. Ren Baoping and He Houcong (2022) proposed that the digital talent training mode in the process of high-quality development of digital economy empowerment should connect the supply side and demand side of digital talent training, cultivate innovative digital talents through cooperation of production, learning and research, and promote the rational allocation of digital talent resources ^[6]. Wang Haochen (2021) proposed that digital talent training should include digital technology and comprehensive ability. In addition to the digital skills required for production and digital environment operations, it is also necessary to cultivate employees 'creative thinking and the ability to discover and solve problems^[7]. Cardenas-Navia et al.(2019) suggest that higher education can be made responsive to digital skills needs by establishing "strategic business-higher education partnerships" to enhance digital literacy among job seekers and on-the-job employees ^[8]. Tambe et al.(2019) proposed that in the era of artificial intelligence, in order to achieve closer integration with other business departments, HR executives should master the ability of data analysis ^[9]. Valeri et al.(2019) introduced the cooperation between Canadian public administration departments, higher education institutions and enterprises to carry out digital ability training programs combining work and study, and provide digital skills training for graduate students by means of internship, on-site teaching and apprenticeship^[10].

Based on the classification of digital talents in the U. S. Army and the characteristics of public administration in China, this paper divides the digital talents in public administration into digital leaders, digital enablers and digital technicians. On this basis, the overall framework for the construction of digital talent team will be constructed, the training standards for digital talents will be clarified, the training system for digital talents planning will be designed, and the certification mode for digital talents will be innovated to provide sustainable and reliable digital talent team for the digital transformation of public administration departments.

2 Framework for the Construction of Digital Talent Team in Public Administration Departments

The overall framework of "three layers and four pillars" for the construction of digital talent team is shown in Figure 1. The "three layers" mainly refer to the construction

of digital talents, the construction of digital talent pool and the construction of digital talent training center, while the "four pillars" divide the digital talent construction layer into four core supports: digital talent standard, digital talent planning, digital talent cultivation and digital talent evaluation from the perspective of the whole process of talent cultivation and use. The construction of digital talent pool aims to realize the dynamic closed-loop management of digital talents around the digital transformation mission of public administration departments. The construction of digital talent training class is the landing measure of digital talent training and the bottom foundation support of digital talent team construction. Through training system construction, resource construction and brand culture building, the implementation and effect improvement of digital talent training shall be strengthened.

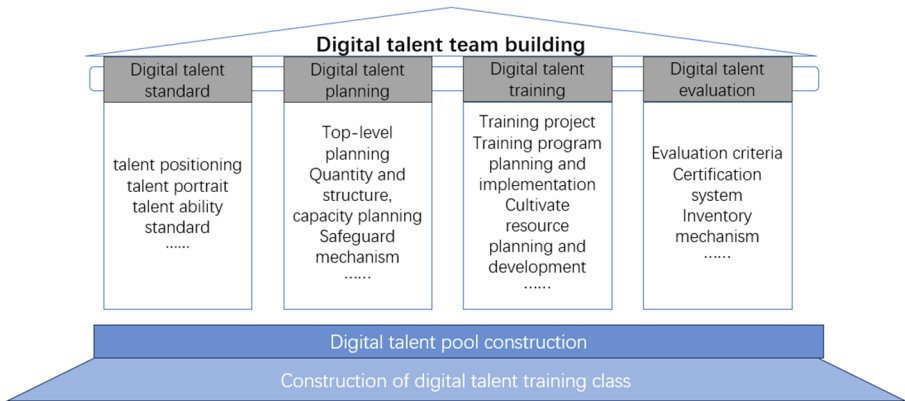


Fig. 1. General framework of digital talent team construction in public administration departments

3 Standards for the Use of Digital Talent Training in Public Administration Departments

Design of digital talent training standards for public administration departments is shown in Figure 2. First of all, in view of the digital transformation needs of public administration departments, digital talents are divided into digital leadership talents, digital enabling talents and digital technical talents by defining the positioning of digital talents. Among them, digital leading talents manage the digital implementation process and grasp the direction of digital transformation; digital enabling talents improve the business value of digital assistants to closely combine business and digitalization; digital technical talents are responsible for digital technology adaptation and implementation application of digital transformation work.

The standards of digital talents in public administration departments mainly include the qualification standard of digital talents and the ability model of digital talents. The former is the "bottom line" standard of digital talents, and the latter is the

"top" requirement of digital talents, which together provide scientific basis for the cultivation, use and evaluation of digital talents.



Fig. 2. Digital talent training standards for public administration departments

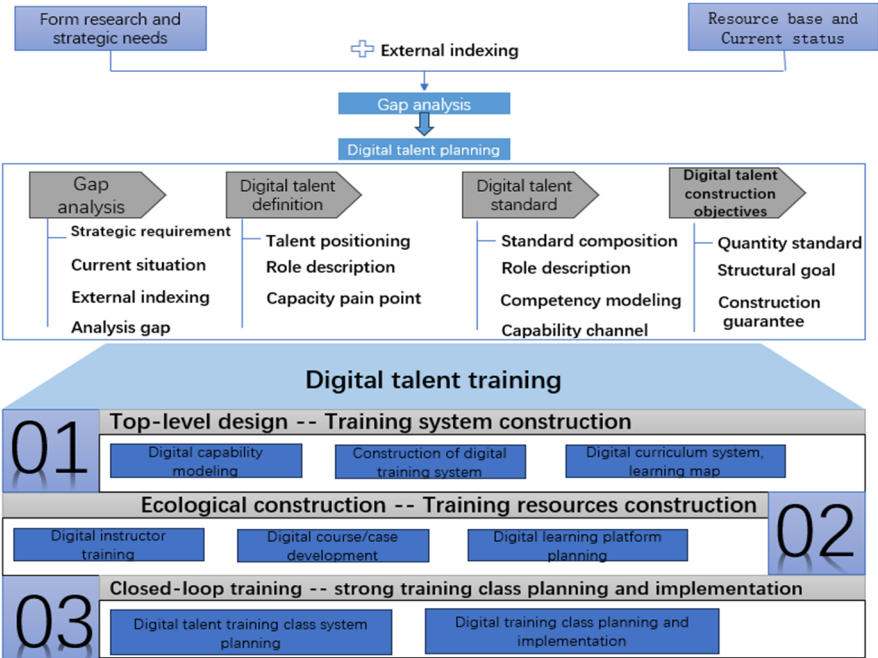


Fig. 3. Training system of digital talent planning in public administration departments

The formulation of qualification standards for digital talents in public administration departments is divided into three stages: one is to focus on the digital transformation of public administration departments, comprehensively sort out the key post information of digital transformation, investigate, diagnose and analyze the demand for digital talents in digital transformation work; The second is the design of

qualification standards for digital talents in public administration departments. By clarifying the basic conditions, knowledge requirements and technical requirements, the qualification standards for digital talents in the digital transformation work are clearly defined, and the professional threshold for digital talents is given. Third, optimize and calibrate the qualification standards for digital talents in public administrative departments. Through feedback on the employment and use of digital talents, iteratively optimize and calibrate the qualification standards for digital talents, and continuously improve the efficiency of the use of digital talents.

The key of constructing digital talent capability model of public administration department lies in scientific modeling and analysis of digital talent capability of public administration department, which mainly includes digital talent capability framework, digital talent capability modeling and digital talent capability modeling verification. Among them, the competency framework of digital talents in public administration departments should include not only digital technology "hard skills" such as information technology, data analysis and engineering ability, but also digital literacy "soft skills" such as digital concept, agility adaptability and innovative design thinking. The modeling and verification of digital talent capability of public administration department is based on the framework of digital talent capability and quality, and the targeted detailed design is carried out in combination with the needs of digital transformation of public administration department, such as digital decision-making capability, network security capability, data processing capability, etc.

4 Digital Talent Planning and Training System for Public Administration Departments

The digital talent planning of public administration department is an important foundation for the construction of digital talent team, and the key measure for the construction of digital talent team is to carry out the digital talent training of public administration department systematically, in different fields and at different levels. The design gives the digital talent planning and training system of public administration departments as shown in Figure 3, which mainly includes two parts: digital talent planning and digital talent training.

The premise of digital talent planning in public administration departments is to study and judge the strategic needs of digital transformation work, master the base of digital talent training and use resources, and comprehensively carry out digital talent gap analysis. On this basis, clearly define the definition of digital talents, enhance the sense of belonging of digital talents; clarify the standards of digital talents, improve the clarity of digital talent planning objects; clarify the objectives of digital talent construction, and provide sustainable and reliable digital talent team support for the digital transformation of public administration departments.

Digital talent training in public administration departments is a key measure for the implementation of digital talent planning in public administration departments. From the three dimensions of top-level design, ecological construction and closed-loop training, systematic training ideas are adopted to systematically construct

training resources to ensure the closed-loop implementation of digital talent training project planning. In terms of top-level design, through modeling digital ability, systematic planning of digital training, supporting construction of digital curriculum system and learning map, systematic construction of training system. In terms of ecological construction, the trinity of digital lecturers, digital courses and digital platforms is promoted, and digital training resources are strengthened ecologically. In terms of closed-loop training, the quality of digital talent training will be comprehensively improved through the planning and closed-loop implementation of the strong training class system with the digital transformation of public administration departments as the starting point.

5 Certification Mode of Digital Talent System in Public Administration Departments

Focusing on the ability demand of digital transformation professionals in public administration departments, a hierarchical and classified digital talent certification system shall be formulated to guide the continuous improvement of digital talents and guide the cultivation of digital professionals. The digital talent demonstration mode mainly includes five components: talent standard formulation, certification question bank development, evaluation means matching, certification system construction and training path planning, as shown in Figure 4.

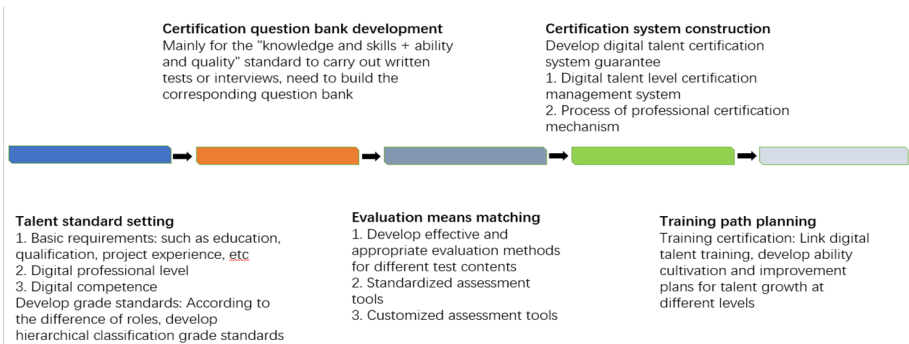


Fig. 4. Digital talent certification model for public administration departments

1. Establishment of talent standards. It mainly completes the setting of basic conditions such as talents' educational background and experience, and gives the requirements for talents' digital professional level and ability quality. Usually, hierarchical standards are formulated according to the types of digital talents.

2. Development of certification question bank. Mainly for the "knowledge skills + ability quality" standard to carry out written examination or interview, usually need to build the corresponding question bank as the basis.

3. Evaluation means adaptation. According to the demand of digital talents in public administration departments, develop effective and standardized evaluation tools, and adopt standardized evaluation tools or customized evaluation tools as needed.

4. Certification system construction. It provides compliance standards for digital talent certification, mainly including digital talent grade certification management system and digital talent professional certification mechanism process construction.

5. Cultivate path planning. Aim at the cultivation of digital talents, formulate targeted promotion plans for the growth and cultivation of digital talents at different levels and types, and ensure that learning is needed and used.

6 Conclusion

In view of the urgent problems of relatively slow construction of digital talents in public administration departments, shortage of digital talents, serious shortage of reserves, and low level of talents 'digital ability, this paper constructs the overall framework of "three layers and four pillars" for the construction of digital talents, clarifies the qualification standards of digital talents and the ability model of digital talents, designs the training system of digital talents planning systematically, in different fields and at different levels, from the formulation of talent standards, the development of certification question banks, Five aspects of evaluation means matching, certification system construction and training path planning put forward the digital talent certification mode, which provides reference for the construction of digital talent team in public administration departments.

References

1. Huang Huang, Xie Sixian, Yao Qingchen, Zeng Yu, Zhang Quan, Yun Meili, Zhang Weiyl. Digital Enabling Governance Synergy: "Next Steps" for Digital Public Administration Construction [J]. E-government, 2022, Issue 4
2. Bao Jing, Fan Ziteng, Jia Kai. A Study on the Governance Pattern of Digital Public Administration: Conceptual Discrimination and Hierarchical Framework [J]. E-government, 2020, No. 11
3. Zhao Huiguang, Zhang Liwei, Wang Huawei. Research on Digital Talent Cultivation Approaches under Big Data Background [J]. China-Arab Science and Technology Forum (Chinese and English), 2020, Issue 4
4. Shao Zhaozhao, Jiang Xiaoqiang. The construction of digital talent team in colleges and universities [J]. China Education Network, 2023, (10): 77-80
5. Na Dandan, Li Ying. Research on Policy Tools for Digital Transformation of Manufacturing Industry in China [J]. Administrative Forum, 2021, 28 (01): 92-97.
6. Zhang Xinxin and Liu Yiran (2022) proposed a digital literacy system and digital skill system composed of digital adaptability, digital competence and digital creativity. Zhang Xinxin, Liu Yiran. Editorial Digital Literacy and Skills System Construction---Thinking Based on Publishing Deep Integration Development Strategy [J]. China Editor, 2022 (06): 4-10.

7. Ren Baoping, He Houcong. Digital Economy Enabling High Quality Development: Theoretical Logic, Path Selection and Policy Orientation [J]. Financial Science, 2022 (04):61-75.
8. Wang Haochen. Thoughts and Suggestions on China's Industrial Transformation in the Era of Industry 5.0 [J]. Development Studies, 2021, 38 (07):64-69.[8]Cardenas-Navia,Isabel,Fitzgerald,Brian K.The digital dilemma:Winning and losing strategies in the digital talent race[J].Industry and Higher Education,2019,33(3):214–217.
9. Prasanna Tambe,Peter Cappelli,Valery Yakubovich.Artificial Intelligence in Human Resources Management:Challenges and a Path Forward[J].SSRN Electronic Journal, 2019,61(4):15-42.
10. Walker Valerie,Bowkett Gail,Duchaine Isabelle.All Companies Are Technology Companies:Preparing Canadians with the Skills for a Digital Future[J].Canadian Public Policy,2019(44):153-15.

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