

Exploration of pathways for applied universities in the cultivation and management of digital talents

Xinying Jin¹

School of Painting and Art, China Academy of Art, Hangzhou, Zhejiang, 310002, China

Abstract. With the continuous development of digitalization in society, the gap of digital talents has also increased significantly. In recent years, China has achieved significant results in the cultivation of digital talent teams. However, at present, the overall number and quality of digital talents delivered by colleges and universities still have some gaps compared with the high standards of enterprises. There are problems in the talent training mode, such as lagging training system, insufficient innovation in teaching and assessment methods, and the need to strengthen teaching practice. Combining the practical needs of digital business environment for talents, this paper puts forward relevant suggestions for applied universities on how to cultivate digital talents under the big background of digitalization from the perspectives of concept updating, framework construction, diversified governance and so on, in order to accelerate the pace of reform and adjustment and meet the urgent needs of society and enterprises for digital talents in the development trend of the times.

1 Introduction

With the rapid development of science and technology in today's world, emerging technologies such as cloud data, Internet, and artificial intelligence are continuously changing people's production, life, and learning methods. With the landing of these new technologies in various industries, the digital development of enterprises has also entered an acceleration period, and enterprises' demand for digital talents has gradually increased. In the report of the 20th National Congress of the Communist Party of China, General Secretary Xi Jinping made important arrangements for running education satisfactory to the people from the overall situation of the development of the Party and the country, emphasizing "promoting the digitalization of education, and building a learning society and learning country with lifelong learning for all". Whether it is social needs or national policies, new

requirements and challenges have been proposed for the cultivation and management of digital talents in applied universities.

2 Related Work

2.1 Practical needs for cultivating and managing digital talents in applied universities

2.1.1 Talent Requirements for Enterprise Digital Transformation

In the past decade, the emergence of mobile Internet has addressed the limitations of computer devices, eliminated time and space constraints, and fulfilled the public's aspiration to access the internet anytime and anywhere. As of 2022, China's digital economy has reached a scale of 50.2 trillion yuan, constituting 41.5% of the GDP[1].

¹ Corresponding author: 0122024@caa.edu.cn

As the digital economy and network information technology continuously extend into traditional sectors, services like ride-hailing, food delivery, and online shopping have become ubiquitous. Various enterprises have deeply integrated technologies such as the Internet, big data, and artificial intelligence. The demand for digital talent in various sectors is pressing. It is estimated that there is an approximate shortage of 30 million digital talents in China[2].

2.1.2 Opportunities and Challenges of the Modern Era

Following the 2020 outbreak of COVID-19, a majority of enterprises were compelled to transition from traditional offline office work to online operations, heavily relying on digital management. Furthermore, the recent surge in live streaming and cross-border digital trade has expanded businesses into international markets, intensifying the demand for digital talent across the entire industry spectrum. In 2022, the introduction of ChatGPT by the U.S. company OpenAI, with its high recognition accuracy, precise dialogue, and robust functionality, underscores the significance of artificial intelligence in various domains. The displacement of basic manual labor by machines has, in turn, created a demand for novel categories of digital talent in the realms of artificial intelligence application, maintenance, and innovation. Iterative digital technologies are accelerating the integration of digital transformation and innovation in education.

2.2 The Current State of Digital Talent Cultivation in Applied Universities

Digital transformation in enterprise management has been ongoing for over a decade. While the extent of digitalization varies across different types of enterprises, this shift is inexorable[3]. In recent years, emerging Internet companies have achieved a higher level of digitalization, and traditional companies are likewise undergoing gradual reforms to align with the digital transformation. Nonetheless, the rate at which colleges and universities are cultivating digital literate professionals remains relatively sluggish. While a few institutions have initiated reforms to integrate the digital training model into classroom teaching, there

still exists a noticeable disparity when compared to the pressing demands set forth by rapidly evolving enterprises. These challenges primarily manifest in the following ways:

2.2.1 The Mismatch Between Talent Training and Digital Economy-Related Industry Needs

To illustrate, the curriculum of management accounting in China is primarily based on "imported knowledge." The textbooks used for teaching management accounting in colleges and universities are predominantly translated versions of Western management accounting books[4]. Over time, management accounting textbooks have given insufficient consideration to the utilization of information systems and information technology [5]. As a result, there exists a disconnect between the teaching content of digital economy-related majors and the requirements of industrial development. Consequently, numerous graduates in these fields are ill-prepared to meet the contemporary industry requirements related to data analytics and capacity development. Regarding faculty, the traditional teaching teams, despite their extensive teaching experience, often lack the requisite digital business management thought processes. Additionally, instructors in the field of computer science may possess limited expertise in relevant professional knowledge, and colleges and universities seldom have cross-disciplinary talent available. Consequently, the collaborative faculty teams exhibit certain deficiencies to a certain degree.

2.2.2 Insufficient Innovation in Teaching and Assessment Approaches

Regarding teaching content, courses in applied universities predominantly adhere to the traditional "teacher-centered" model, where students passively receive knowledge. This teaching approach is characterized by its one-dimensional nature, where students passively absorb information without opportunities for practical application that could enhance their learning experience. Some educators place their hopes for practical application on the school's integrated internship programs. During these

internships, students adhere to the guidelines of the hosting organizations to comprehensively apply their classroom-acquired knowledge and hone their skills. Unfortunately, this approach often results in a deficiency in the holistic development of students, as it fails to adequately combine knowledge acquisition with practical skill development. Conversely, in curriculum assessment, the predominant method is paper-based testing, which primarily evaluates the knowledge points covered in the classroom, with limited focus on practical applications. This approach hinders the assessment of the comprehensive data processing and analytical abilities that businesses demand. Moreover, within the teacher's evaluation system, some scholars have observed that the existing domestic university quality assessment system is largely patterned after the SEEQ system in the UK and the IDEA system in the US. Unfortunately, a substantial number of universities fail to comprehensively comprehend or adopt the advanced foreign evaluation systems, resulting in superficial student evaluations that lack real impact and fail to drive significant changes in classroom teaching methods.

2.3 The Path to Enhancing Digital Talent Cultivation and Management in Applied Universities

2.3.1 Revising the Concept of Managing Digital Talent Education

In terms of teaching methods, we should adhere to a student-centered approach. Vision drives actions. Applied universities should develop a comprehensive strategic roadmap and policy initiatives for digitally transforming education, aligning with national policies. This transformation should consider the unique attributes of the current digital economy industry, as well as the evolving landscape and societal requirements for digital talent. It should begin by analyzing industry characteristics, talent structures, talent-to-position alignment, and other relevant perspectives. In conjunction with the institution's inherent strengths, they should create talent training and management programs that leverage digitalization as a catalyst for educational reform.

2.3.2 Establishing a Framework for Digital Talent Education Management

In the digital era, individuals require not only professional expertise but also digital literacy. Within the classroom, it is imperative to incorporate not only dedicated digital technology courses but also to infuse computer languages, big data analysis, cloud computing, and other practical skills into professional course instruction. This approach fosters students' all-encompassing competencies, encompassing both digital literacy and professional aptitude. Moreover, teaching materials should incorporate real-world digital application scenarios, either within textbooks or as supplementary materials, enabling students to instantly learn and practice.

For teachers, strengthen the construction of teachers in the digital age, and carry out multi-level digital capacity improvement work for teachers according to course types, teacher age and other considerations, so as to improve the digital literacy of all teachers and enable the teaching team to have ideas, abilities to develop, explore and upgrade digital technology-assisted "classroom + online + practice" hybrid education courses.

Regarding faculty, it is vital to bolster the development of educators in the digital era. Initiating multi-tiered efforts to enhance the digital competencies of teachers, tailored to factors like course types and teaching experience, is essential. This endeavor is aimed at elevating the digital literacy of all faculty members and empowering the teaching team with the vision, skills, and capacity to develop, explore, and enhance hybrid education courses supported by digital technology, combining the "classroom, online, and practice" components. At the same time, teachers are organized to discuss the construction of curriculum informatization, and school leaders attach importance to the improvement of the information technology application ability of the teacher group. A large amount of financial support is provided for teaching ability competitions and the application of high-quality online courses, promoting the improvement of teachers' ICT application ability from a systemic perspective.[7]

In terms of teaching assessments, it is essential to elevate the role of teamwork in daily examinations.

Introduce practical challenges encountered by businesses, enabling students to propose solutions through group discussions and collaboration, thereby nurturing students' abilities in team management and cooperation. In phased or final assessments, it is recommended to employ representative enterprise case analyses as a substitute for certain elementary knowledge-based examinations. The focus should be on fostering students' comprehensive application skills.

2.3.3 Enhancing the Diversified Governance System for Managing Talent Education

At the governmental level, enhance support for the development of digital talent through policies, educational initiatives, and related efforts. Actively engage outstanding domestic and foreign digital experts in the development of local digital ecosystems and expedite the creation of a digital talent pool. At the university level, On the one hand, building a digital management team for education, continuously strengthening information awareness, and training with certain data statistics and analysis abilities can serve to achieve high-level and professional education digitization.[8] On the other hand, prioritize leveraging the resource advantages of governments at different tiers and foster collaboration between universities and various enterprises. In practical education, employ a cross-disciplinary teaching approach involving the "primary instructor + industry expert." Supplement this with short-term exchanges, lectures, forums, and other extracurricular activities, both within and outside the academic environment. For example, adopting a dual mentor teaching method of "teacher+enterprise management accounting personnel", inviting enterprise management accounting personnel with rich practical experience in management accounting into the classroom, where they share and guide students in management accounting training and practical teaching, filling the gap in practical experience for university teachers.[9] This approach expedites the application of students' acquired knowledge and actively fosters the integration of industry, academia, and research to prepare students for the upcoming challenges of digital transformation. At the same time, keeping up with the development pace of information technology and

valuing the updating and iteration of digital experimental platforms can truly play a role in supporting the cultivation of digital talents.[10]

3 Conclusion

In the era of digital transformation, it is imperative to keep pace with talent development. The establishment of a comprehensive training and management model for digital talents within applied universities is a long-term, systematic undertaking. This model should undergo gradual refinement, encompassing changes in top-level design concepts, the strengthening of faculty teams, and the enhancement of diversified governance talent systems. The goal is to empower talent development and management comprehensively through digital technology, thereby infusing substantial impetus into the construction of a lifelong learning society and country that benefits all.

References

1. Yansheng Wen, Qinghua Tao. Strengthening the digital talent team and accelerating the high-quality development of digital economy. *Guangming Daily*, 07-24 (06)(2023)
2. Yansheng Wen, Qinghua Tao. Strengthening the digital talent team and accelerating the high-quality development of digital economy. *Guangming Daily*, 07-24 (06)(2023)
3. Tong Li, Liming Dong. Analysis on the training of digital management accounting talents in colleges and universities [J]. *Engineering Management*,27(05):38-41(2022)
4. Bo Liu, Yifan Gao, Jing Jin. Current situation and improvement measures of management accounting practice teaching in Chinese universities [J]. *Journal of Mudanjiang University*,28(9)109-111,132(2009).
5. Zongyan Li, Shiyu Qu. What does the management accounting curriculum teach in Chinese universities: A content analysis based on mainstream domestic management accounting textbooks [J]. *Teaching in Chinese Universities*,(6):81-87(2015).

6. Sun Gang. Innovation of Management Accounting Talent Training Mechanism Driven by Big Data and Business Finance Integration [J]. Finance and Accounting Monthly, (2): 88-93(2021).
7. Li Xingyun. Research on the Matching Degree between the Demand for Financial Management Talents Empowered by Digitalization and Talent Training in Universities [J]. Industry and Technology Forum,22 (04): 78-80(2023)
8. Yuqiu Wang. Research on the Digital Management Path of Higher Education in the Perspective of Artificial Intelligence [J]. East China Science and Technology, (03): 86-89(2023).
9. Huang Yiyi. Research on the Reform of Management Accounting Practice Course System in Universities in the Era of Big Data [J]. Modern Business and Industry, 42 (30): 83-84(2021).
10. Huang Ming. Problems and Countermeasures in the Cultivation of Digital Human Resource Management Talents [J]. Journal of Heihe University,14 (01): 72-74(2023).