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Research on the Transformation of Accounting Talent Training under the Background of the Digital Intelligence Era

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Abstract: In the era of digital intelligence, the development and application of digital technology have profoundly influenced the demand structure of accounting talents, posing both huge challenges and opportunities for the accounting profession and accounting education in Chinese universities. At present, there are many problems in the cultivation of intelligent accounting talents in Chinese universities, such as unclear talent training objectives, unreasonable curriculum system structure, unbalanced faculty structure, seriously lagging textbook construction, and outdated teaching methods. We should reshape the training objectives for undergraduate accounting talents, restructure the curriculum system, strengthen the construction of the teaching staff, enhance the development of intelligent accounting textbooks, and innovate teaching methods, in order to promote the transformation of intelligent accounting talent training.

Keywords: Era of digital intelligence; Accounting; Talent cultivation; Transformation

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1. Introduction

With the rapid development of new technologies such as big data and artificial intelligence, human society has fully entered the era of digital intelligence. Empowering high-quality economic and social development through digital technology has become a major development strategy in China and has had a profound impact on various industries. Modern accounting is naturally highly related to data and information technology [1]. The widespread application of digital intelligence technology in enterprises will profoundly affect the supply and demand situation of accounting talents. In the era of digital intelligence, a large amount of repetitive and programmatic accounting work will be replaced by artificial intelligence technology, and the demand for traditional, ordinary accounting talents in the socio-economic system will significantly decrease. Some scholars even believe that accounting will be replaced by artificial intelligence [2], while the demand for accounting talents proficient in digital intelligence technology will increase significantly. However, there is a serious mismatch between the

cultivation of accounting talents and social demand in China [3,4]. At present, the accounting talents cultivated by universities are mainly traditional, and the digital accounting talents cultivated cannot meet the practical needs of enterprises. There is a serious imbalance between the supply and demand of digital accounting talent [5]. In the context of the digital age, how universities can transform and cultivate digital accounting talents that meet social needs is an important issue that needs to be explored.

2. The challenges and opportunities of digital intelligence technology for the accounting profession and accounting education in universities

2.1. The challenges and opportunities of digital intelligence technology for the accounting profession

The widespread penetration and application of emerging technologies such as big data and artificial intelligence in the socio-economic system have significantly changed the environment and operation mode of accounting, profoundly affecting the demand structure of accounting talents, and posing both huge impacts and challenges to the accounting profession, as well as bringing a large number of opportunities.

One of the major functions of accounting is generating and providing financial information. The processing, handling, and generation of accounting information involve many standardized and repetitive techniques. The emergence of artificial intelligence and financial robots has accelerated the digitization and intelligence of accounting business and processes, leading to a shift in accounting functions from "accounting" to "analytical decision-making" [6]. A large amount of repetitive and standardized accounting work will be replaced by artificial intelligence and machine automation, resulting in an oversupply of human capital elements for accounting. A large number of personnel in accounting positions will face the pressure of unemployment and job transfer. Therefore, the digitization revolution will have a huge impact and challenge on the accounting profession.

The digitization revolution will also bring a lot of opportunities for the accounting profession. Firstly, digital technology will enhance the analytical, decision-making, and management functions of accounting. Artificial intelligence will greatly improve accounting efficiency, freeing accounting practitioners from complex accounting tasks and giving them more time and energy to engage in higher-level analysis, decision-making, and management work. Secondly, digital intelligence technology will enrich the technical means of accounting work. The innovative development of emerging technologies provides strong support for the improvement and upgrading of accounting work, which will promote the processing of accounting information to be more real-time, dynamic, and centralized. Accounting will be more standardized, efficient, and convenient than before, and the efficiency and quality of accounting will be greatly improved. Once again, the widespread application of digital intelligence technology will improve the effectiveness of accounting data utilization. The application of intelligent technology will comprehensively enhance the data collection, processing, analysis, and reporting capabilities of enterprises, optimize financial sharing, promote financial intelligence, and enhance the usefulness of accounting work. Big data technology has enriched and made multidimensional the underlying data required for accounting and management decision-making, shifting from primarily being based on "financial data" to a composite data fusion model of "financial data + non-financial data." The development of big data technology can mine massive and high-frequency unstructured data for management and accounting decision-making, thereby enriching the underlying data. Fourthly, the development and application of digital technology will give rise to new digital accounting professions, such as financial data architects and financial data analysts, creating new demand for

accounting talents, and the demand for digital accounting talents will continue to grow. Therefore, for accounting professionals, in order to have strong competitiveness in their profession, they need to master digital skills and become composite talents proficient in accounting professional knowledge and digital technology.

2.2. The challenges and opportunities of digital intelligence technology for accounting education in higher education institutions

The development and application of digital technology will inevitably pose challenges and bring opportunities to accounting education in universities due to its impact on the demand for accounting talent.

In the era of digital intelligence, the demand for traditional accounting talents in enterprises and institutions continues to decline, while the demand for compound digital intelligence accounting talents is strong. Currently, the training of accounting talents in Chinese universities mainly focuses on traditional financial accounting, and the supply of digital intelligence accounting talents lags behind social demand, resulting in a mismatch between the supply and demand of accounting talents. The traditional training of accounting professionals focuses more on the cultivation and training of accounting knowledge and logic, and does not require high mastery of knowledge, such as big data and artificial intelligence. Under this training model, students' professional competence cannot meet the demand for financial and accounting talents in the development of digital technology. This is currently the biggest challenge facing the training of financial and accounting talents in universities. Although most Chinese universities have begun to attach importance to the cultivation of intelligent accounting talents in terms of ideology, it is still difficult to implement in practice due to deficiencies in teaching staff, curriculum system, textbooks, application scenario development, and other aspects. Therefore, the cultivation of accounting talents in Chinese universities needs to transform from traditional accounting-based financial accounting talent cultivation to digital and intelligent composite talent cultivation, in order to meet the demand for digital accounting talents in the digital age economy and society.

The digitization revolution also brings opportunities for accounting education in Chinese universities. Firstly, Chinese accounting teaching, research, and practice will have the opportunity to enhance their influence in the international accounting community. In the transformation of accounting digitization, both the East and the West are standing on the same starting line. We should rely on the practice of Chinese enterprises in intelligence and digitization, comprehensively promote the in-depth development of digital accounting, and export Chinese experience. Secondly, the transformation of cultivating intelligent accounting talents can enhance the status of accounting. Traditional accounting belongs to the accounting type of accounting, and the decision-making relevance of accounting information is weak; the value of creativity has not been well utilized. Intelligent accounting fully utilizes technologies such as big data and artificial intelligence to promote the transformation of accounting towards management-oriented accounting, provide support for enterprise decision-making, enhance value creativity, and more effectively play the role of accounting, thereby enhancing the influence and status of accounting.

3. The current problems in the cultivation of intelligent accounting talents

There is a mismatch between the current demand and supply of accounting talents, due to the many urgent problems that Chinese universities need to solve in cultivating intelligent accounting talents, mainly manifested in the following aspects.

3.1. The positioning of talent cultivation goals is not clear enough

The correctness of the concept and objectives of accounting talent cultivation, as well as the ability to achieve a broad consensus among the training units, are the fundamental prerequisites for promoting the transformation of digital accounting talent cultivation. The digital transformation of accounting talent cultivation is, to some extent, a reform that will face certain risks, as the success of digital transformation is subject to various software and hardware conditions of the training unit, as well as the interests of the existing teacher group. Moreover, the training unit needs to have a high investment in digital transformation. At present, some Chinese universities do not have a sufficient understanding of the concept and goal positioning of cultivating intelligent accounting talents. They believe that the transformation of intelligent accounting talent cultivation is "accounting + intelligent technology," focusing on the simple coupling of accounting and technology. Moreover, the emphasis on funding and resource investment for intelligent transformation is far from enough, which restricts the smooth progress of intelligent transformation in accounting talent cultivation.

3.2. Unreasonable course system structure

The construction of a curriculum system is the core of transforming digital accounting talent cultivation, but currently, the curriculum system in Chinese universities is difficult to meet the societal demand for digital accounting talent. Many universities only add a few courses related to intelligent accounting, big data technology, or informatization on the basis of traditional accounting core courses, rather than designing a systematic course system structure based on the practical needs of intelligent accounting talents. Moreover, due to constraints in teaching staff, the quantity and quality of intelligent accounting and big data technology courses are seriously insufficient, and financial accounting courses still dominate.

3.3. Uneven structure of teaching staff

Whether there are teachers who match the training objectives is the key to achieving the digital transformation of accounting talent training. The transformation of accounting talent cultivation in the digital intelligence era requires the enhancement of composite teaching talents in data analysis, computer programming, and accounting majors. But there are very few such talents, and the teaching staff is mainly composed of traditional accounting professionals, making it difficult to be competent in teaching intelligent accounting courses. In addition, the assessment and reward and punishment mechanisms of most Chinese universities encourage teachers to invest a lot of energy in publishing high-level papers and obtaining high-level projects, and teachers' enthusiasm for the digital transformation of accounting talent cultivation is not high.

3.4. Serious lag in textbook construction

At present, there is a significant problem of lagging behind the practical needs in the construction of intelligent accounting textbooks, and there is a lack of mature intelligent accounting textbooks. The cultivation of intelligent accounting talents requires the establishment of a complete curriculum system for intelligent accounting. However, due to the lack of theoretical and experimental aspects, the construction of intelligent accounting textbooks cannot keep up with the needs of accounting talent cultivation. At present, big data accounting or intelligent accounting is in its infancy, and there is a widespread lack of relevant textbooks and auxiliary materials. It is urgent to reconstruct the textbook system and content, write teaching cases, and achieve effective interdisciplinary integration.

3.5. The teaching method is relatively outdated

At present, accounting teaching methods are still mainly based on traditional teacher lectures, with a single and ordinary form. Smart accounting does not use AI technology to teach accounting courses, but utilizes smart technology to handle accounting problems. The teaching of intelligent accounting requires application scenarios. In talent cultivation, the important link to achieve the combination of profession and technology is the development of core scenarios, it will lead to the phenomenon of "two skins" between profession and technology.

4. Countermeasures for the transformation of accounting talent cultivation in the era of digital intelligence

4.1. Reshaping the training objectives of accounting undergraduate talents

The starting point of the transformation and reform of accounting education is to change the concept and goals of talent cultivation. The environment is an external condition for human development, and the cultivation of accounting talents needs to be carried out in a targeted manner according to changes in the environment. In the era of digitization, accounting professionals should possess both digital and intelligent thinking, abilities, and qualities. To adapt to the changes in the accounting professional environment, the cultivation of intelligent accounting talents must be targeted to meet the needs of intelligent accounting work. Chinese universities should transform the concept of cultivating undergraduate accounting talents, take moral education as their mission, focus on the comprehensive development of morality, intelligence, physical fitness, aesthetics, and labor skills, and emphasize the cultivation of composite and innovative accounting talents with solid accounting professional knowledge, high comprehensive mathematical and intellectual qualities, strong mathematical and intellectual accounting abilities, strategic thinking in mathematics, and correct ethical and moral values in mathematics.

4.2. Refactoring the curriculum system

To cultivate intelligent accounting talents who can adapt to the environment of the digital age, the curriculum system is the core carrier, and it is necessary to reconstruct the accounting curriculum system. The reconstruction of the accounting curriculum system is not simply reassembling and combining different courses, but requires a framework for the training objectives and ability requirements of intelligent accounting talents, and the rigorous integration of key knowledge points and ability quality training logic into specific courses. Firstly, retain the traditional accounting course modules. The traditional accounting course module is the foundation for cultivating students' preliminary financial analysis ability, consisting of core courses that embody accounting thinking logic. Secondly, a new group of courses on the application of technical tools will be added, including computer programming basics, intelligent financial system architecture design, Python application in enterprise finance, RPA financial robot application, business data analysis, and other technical tool application courses, to cultivate students' mathematical and technical abilities. Thirdly, a new business finance + technology course group will be added, including an intelligent accounting management module, an intelligent financial operation module, and an intelligent audit management module, to cultivate students' ability to integrate business finance and technology, that is, the ability to integrate accounting theoretical knowledge with digital technology.

4.3. Strengthen the construction of the teaching staff

Having a faculty that matches the training objectives is the key to achieving the transformation of digital accounting talent cultivation. Under the background of digital technology, the transformation of accounting

talent cultivation requires strengthening the teaching staff of basic disciplines such as mathematics and computer programming, as well as a composite teacher who is familiar with data analysis, computer programming, and proficient in accounting professional knowledge. Strengthening the construction of the teaching staff can be approached from the following aspects: firstly, introducing professional talents with interdisciplinary backgrounds, such as accounting, computer science, and mathematics. Secondly, implement the "going global" strategy to cultivate teaching staff. In accounting and interdisciplinary majors, select outstanding master's students to pursue a doctoral degree in intelligent finance at public expense or study abroad. After graduation, stay on campus to teach and supplement the follow-up strength of intelligent finance talent training in universities. Thirdly, mobilize the enthusiasm of teachers to learn new technologies, and cultivate excellent composite accounting professionals who can transform and cross disciplines from within universities.

4.4. Strengthening the construction of intelligent accounting textbooks

The construction of intelligent accounting textbooks is an important support for the cultivation of intelligent accounting talents. We must vigorously strengthen the construction of a high-quality textbook system that is compatible with the training of accounting talents in the era of the digital economy, and deeply reconstruct the textbook system. Given the severe shortage of intelligent accounting textbooks, it is necessary to organize scholars from leading Chinese universities with rich experience in intelligent accounting teaching to develop intelligent accounting textbooks. At the same time, the education department should encourage, support, and promote the construction of rich media, intelligent, and mobile interactive textbooks that integrate traditional paper textbooks with new media, and provide corresponding platforms to assist in textbook construction and communication.

4.5. Innovative teaching methods

Teaching methods are an important way to cultivate talents. The innovation of accounting teaching methods in the era of digital intelligence is reflected in the deep integration of modern information technology and education. In the teaching process, accounting teachers should try to use intelligent technology to innovate teaching methods, integrate intelligent knowledge, thinking, ethics, and other content into accounting courses, and implement accounting case teaching in combination with intelligent application scenarios. In terms of teaching methods, we should increase the intensity of case-based teaching, combine accounting professional knowledge with the characteristics of digital intelligence technology, achieve project case-based and experimental case-based teaching, and use digital intelligence technology to implement accounting professional cases, further linking accounting professional knowledge with technology and forming an intelligent accounting case library.

Disclosure statement

The author declares no conflict of interest

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