

Transformation and Transformation of Accounting Professional Talent Training in the Era of Digital Intelligence

-- Taking Anhui University of Finance and Economics as an Example

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Abstract

As human society enters the 21st century, the world economy is entering a period of development dominated by digital intelligence technology, especially China, which is at the forefront of the world in the development and application of digital intelligence technology. In the era of digital intelligence, the accounting environment has become more volatile, uncertain, complex, and ambiguous. Digital intelligence technology has brought unprecedented impact and shock to accounting theory and higher accounting education. The social demand for accounting talents has also changed, and the demand for high-end accounting talents will increase significantly. In order to meet the demand for high-end accounting talents in the era of digital intelligence, Anhui University of Finance and Economics has opened an experimental class for intelligent accounting micro majors, which has conducted a beneficial exploration of the transformation and transformation of accounting professional talent cultivation. There are also many problems in this process, mainly reflected in the mismatch between the training mode and social needs, the imperfect curriculum system, and the inability of the teaching staff to meet the requirements of the times. Finally, the article proposes countermeasures and suggestions for the transformation and transformation of accounting professional talent cultivation.

Keywords

Era of Digital Intelligence; Big Data; Artificial Intelligence; High End Accounting Talents; Talent Cultivation.

1. Introduction

As human society enters the 21st century, the world economy is entering a period of development dominated by digital and intelligent technologies, especially China, which is at the forefront of the world in the development and application of digital and intelligent technologies. As early as the 19th National Congress report, General Secretary included "Digital China" in the national program document, emphasizing the construction of Digital China. At present, the development of China's digital economy is moving from the extensive connection stage of "Internet plus" to the innovation leading stage of "artificial intelligence+". "Internet plus" has built a digital base for the interconnection of everything, accumulated valuable digital scenes and data resources, and "AI+" has helped upgrade industrial intelligence. According to a report by the World Intellectual Property Organization, China has become the world's largest holder of artificial intelligence patents, accounting for 60%. The rapid development of digital intelligence technology has had a profound impact on the social development of our country

and also marks the arrival of the digital intelligence era. The pace of innovation and iteration in information technology is accelerating, and new models and formats are constantly emerging. Cloud computing is driving big data to become an important strategic resource, and this combination of intelligent technology, intelligent formats, and intelligent environments is creating a thriving digital era landscape.

In the era of digital intelligence, the accounting environment has become more volatile, uncertain, complex, and ambiguous. What is the impact of digital technology on accounting theory and accounting education? How has the social demand for accounting personnel changed? How to transform and transform the training of accounting professionals? These issues have always troubled the accounting practice and education sectors. This article explores them one by one based on the actual situation of our school's accounting talent cultivation.

2. The Impact of Digital Technology on Accounting Theory and Accounting Education

2.1. The Impact of Digital Intelligence Technology on Basic Accounting Theory

2.1.1. Impact on the Essence, Objectives, and Functions of Accounting

People still have different opinions on the essence of accounting, and there is no definitive conclusion. There are two representative views in history, one is information systems theory, represented by American accountant A.C. Littleton and Chinese scholar Ge Jiashu, who both believe that accounting is a system that primarily provides financial information [1]; Another type is the theory of management activities, represented by figures such as Fayol, Yang Jiwan, and Yan Dawu in China. They all believe that accounting is a management activity aimed at improving economic efficiency[2]. In the era of digital intelligence, with the development of digital technology, the Internet of Things can generate massive amounts of data, cloud computing can perform storage and computing power scheduling, big data analysis and mining technology, and artificial intelligence make the acquisition of accounting information more real-time, automated, and intelligent. The encryption algorithm of blockchain ensures the security of data transmission and storage, and guarantees the credibility of data interaction. This "perception connection computation intelligence trust" technological loop is driving the penetration of digitization from single point applications to the entire domain. This has also led to a transformation of the essence of accounting from traditional "information system theory" and "management activity theory" to "data-driven value management and strategic support". Its connotation has expanded to multiple levels such as real-time data processing of accounting information, risk control, cross domain and cross departmental collaboration, and enterprise value management. Different perspectives on the essence of accounting are becoming more integrated.

The accounting objective is the level or result achieved by accounting work. There are two controversial academic views on accounting objectives in history: the decision usefulness view and the entrusted responsibility view. The two viewpoints are applicable in different economic environments, mainly due to the existence of a definite entrusted relationship in the concept of entrusted responsibility, emphasizing the objectivity of accounting information; In contrast, the concept of decision usefulness does not exist, but it emphasizes the relevance of accounting information. The focus of controversy between these two views lies in the trade-off between the relevance and reliability of accounting information[3]. In the era of digital intelligence, with the development of digital technology, the immutability of blockchain technology ensures the reliability of financial data. At the same time, the Internet of Things, big data, cloud computing, and artificial intelligence technologies ensure that the process of capturing, processing, analyzing, and managing financial data is highly real-time, automated, and intelligent, providing decision-making usefulness for high-quality accounting information.

Although China's enterprise accounting standards clearly state dual objectives, in the era of digital intelligence, the application of new technologies enables financial data provided by enterprises to better balance usefulness while ensuring reliability, and the duality of accounting objectives is more reflected.

For a long time, people have defined the basic functions of accounting clearly, mainly reflected in accounting and supervision. With the development of science and technology, new accounting functions continue to emerge and expand. Electronic and automated accounting information systems have become an integral part of enterprise management information systems, serving the economic management activities of enterprises more efficiently. With the help of computer software, accounting functions have expanded from basic accounting and supervision functions to functions such as forecasting, decision-making, planning, and evaluation. In the era of digital intelligence, with the development of digital technology, it significantly improves the efficiency and accuracy of accounting work by replacing repetitive labor and optimizing processes. For example, financial robots (RPA) can automatically complete standardized tasks such as invoice recognition, bank reconciliation, and report generation, reducing manual operational errors; Intelligent algorithms can process accounting verification, tax calculations, and other processes through preset rules, achieving 24/7 uninterrupted operations. In this way, accounting personnel are liberated from basic tasks such as data entry and shifted towards data analysis and decision support, as well as value assessment and value innovation. The accounting function is extending from "back-end accounting" to "front-end empowerment", building a new value chain. The accounting function is evolving from an expanded function to an accounting transformation function (value assessment, value innovation). At present, accounting transformation functions can more or less utilize digital intelligence technology to complete certain tasks or functions. However, due to the limitations of digital intelligence technology in the accounting field, accounting work or functions cannot be widely related at present.

2.1.2. Impact on Accounting Assumptions and Accounting Reports

The complexity of economic activities determines that accounting activities are also a complex process. Accounting personnel must first make axiomatic assumptions about the scope, content, procedures, and methods of accounting when doing bookkeeping, which is known as accounting assumptions. In the era of digital intelligence, with the development of digital technology, the service scope of accounting entities will expand from within the enterprise to various entities in the value chain. Accounting entities will extend to various value activities such as market, research and development, production, and after-sales. The boundaries of enterprises are no longer clear, presenting a network like, multi platform, and fuzzy boundary organization. The transactions of these organizations are more complex and uncertain. Real time data processing and cloud computing enable enterprises to access and update financial information at any time, blurring the boundaries of accounting periods. This real-time nature may require adjustments to accounting systems and reporting methods to reflect more dynamic financial conditions, which is also weakening the going concern assumption. Big data and artificial intelligence can process and analyze non monetary data such as text, images, and videos, which were previously difficult to incorporate into accounting systems. This ability challenges traditional monetary measurement assumptions and promotes accounting systems to become more comprehensive and holistic.

The main content of financial reports is financial statements. The traditional financial report generation model based on historical data cannot meet the real-time requirements of financial information decision-making. In the era of digital intelligence, with the development of digital technology, especially the widespread application of big data, artificial intelligence (AI), and cloud computing, enterprises can grasp their financial status in real time through intelligent data collection, accounting, and intelligent report generation functions. At the same time, the

content of financial reports is more comprehensive, and their data is more diverse and multidimensional, with more "non-financial data" such as incorporating environmental, social, and corporate governance (ESG) as typical non-financial information into the content of financial reports.

In summary, in the era of digital intelligence, digital technology has had a significant impact on accounting theory. In addition, digital intelligence technology also promotes the integration of accounting, finance, auditing, taxation and other disciplines, promoting the realization of "big accounting". Big accounting "will be an important development trend in the future accounting reform.

2.2. The Impact of Digital Intelligence Technology on Higher Accounting Education

In the era of digital intelligence, technologies such as big data, artificial intelligence, and cloud computing are profoundly changing the ecology and operational mode of the accounting industry. This transformation has also brought comprehensive and profound impacts to higher accounting education. Especially, financial robots (RPA) can replace accounting personnel to engage in more fundamental work such as accounting, enabling more accounting personnel to turn to high-level data analysis and decision support, as well as value assessment and value innovation. Accounting personnel need to be competent in these tasks, in addition to mastering accounting professional skills, they also need to master digital intelligence skills and possess digital strategic thinking. The financial analysis and decision-making of accounting personnel are complex and comprehensive decisions based on intelligent analysis. Accounting personnel have become high-end accounting talents with high moral character, excellent quality, and outstanding professional ability in the era of digital intelligence[4].

In the era of digital intelligence, with the development of new technologies, the demand for ordinary accounting talents in various economic organizations of society will significantly decrease. Under the category of "big accounting", the demand for composite and high-end accounting talents with professional knowledge in accounting, finance, auditing, taxation, etc. will increase significantly. However, an unfavorable social reality is that there is a mismatch between the supply and demand of accounting talents. Every year, more and more accounting graduates cannot find jobs, while employers cannot find the high-end accounting talents they need[5]. At present, the supply of high-end accounting talents in society is clearly insufficient, and the reason for this phenomenon is largely related to exam oriented education, without considering the development trend of accounting talent demand in the era of digital intelligence.

In the era of digital intelligence, higher accounting education should be guided by market demand, focusing on cultivating students' decision-making and analysis abilities, as well as value innovation abilities. However, currently many universities still aim to cultivate professional talents who master accounting skills and are familiar with accounting standards in traditional higher education. The training objectives of higher accounting education urgently need to shift from cultivating "accounting oriented" talents to cultivating "composite, management oriented, innovative" high-end accounting talents with data analysis ability, business insight, strategic decision support ability, and mastery of digital technology application. Currently, some universities have conducted beneficial explorations on the transformation and reform of accounting talent cultivation. Among the 336 accounting soft science universities listed in China, only 17 universities have explicitly offered majors related to intelligent accounting in their enrollment plans and included them in undergraduate admissions. Among the universities that offer majors or directions in intelligent accounting, there are 4 comprehensive universities, accounting for 23%, and 10 finance and economics universities, accounting for 59%[6]. The reality is that many universities still lack the integration of digital technology and accounting skills, and the boundaries of traditional

accounting knowledge systems have not been broken; The existing course content often lags behind technological development and industry practice, with too much emphasis on traditional accounting theories and methods, and insufficient coverage or depth of emerging content such as big data analysis, the application of artificial intelligence in accounting, blockchain technology, cloud computing, etc; Faced with the teaching needs of the digital age, many teachers lack systematic learning and practical application experience of digital technology, making it difficult to effectively undertake teaching tasks that integrate digital technology. It is precisely for these reasons that the accounting graduates trained are incompetent in the workplace and cannot meet the needs of society. It can be seen that although there have been reforms in the transformation of accounting talent cultivation, the path of reform is still a long and arduous task.

3. The Current Situation of Accounting Talent Cultivation in Our School in the Era of Digital Intelligence

The training of accounting talents in our school is mainly undertaken by the School of Accounting. In recent years, the School of Accounting has established an intelligent accounting micro professional experimental class to meet the demand for accounting talents in the digital age. The class will officially open in May 2024. The core positioning of this experimental class is to empower accounting with technology, integrate accounting with information technologies such as big data and artificial intelligence, cultivate "accounting+IT" composite talents, and focus on the needs of intelligent finance and digital transformation; The training objective is to help students build an ability cube of "professional foundation+digital tools+business insights", cultivate intelligent accounting talents with digital thinking and scenario based innovation abilities, and be able to deeply integrate solid accounting and auditing theories with big data technology; The curriculum system is based on accounting, and the college collaborates with Kingdee Software to offer school enterprise cooperation experimental courses such as big data auditing, big data internal control, and risk management. The teaching content covers core issues such as the integration of intelligent finance with AI and the development of systems that connect big data with accounting practice.

Our school's intelligent accounting experimental class is established on the basis of the original accounting major. Compared to other well-known universities in China, our university's intelligent accounting system lags behind other financial and economic institutions such as Southwest University of Finance and Economics, Renmin University of China, and Shanghai University of Finance and Economics in terms of its establishment time; From the perspective of enrollment methods, this experimental class is selected and established from existing first-year accounting students; In terms of curriculum design, some courses such as big data financial analysis and decision-making, big data audit analysis, big data internal control and risk management, and financial robot application and development have been added to the foundation of traditional accounting courses.

At present, the transformation and reform of intelligent accounting talent cultivation in our school is in the preliminary experimental stage, and the effectiveness remains to be tested by society in the future. There are also many problems in the transformation and transformation of accounting talent cultivation, mainly in the following three aspects:

(1) The training mode does not match the social needs. In the era of digital intelligence, accounting functions are extending from "back-end accounting" to "front-end empowerment", and accounting functions are evolving from expanded functions to accounting transformation functions (value assessment, value innovation). The social demand for composite and high-end accounting talents with professional knowledge will increase significantly. In order to meet the changing social demand for high-end accounting talents, our school has carried out accounting

talent training reforms and opened an intelligent accounting micro professional experimental class. However, in the accounting talent training mode, computer and information courses are basically added to the original accounting basic courses, with less involvement in software design and development. Based on the four modes of accounting talent cultivation proposed by Ma Yongqiang in 2023 (Mode 1: simply adding introductory courses on big data; Mode 2: adding professional courses on big data accounting and finance; Mode 3: emphasizing program design as the core training mode; Mode 4: emphasizing mathematics, statistics, computer program design, and comprehensive professional abilities), from the current perspective of our school's accounting talent cultivation curriculum, our school's accounting talent cultivation mode can only belong to the second mode. For the future accounting talent cultivation mode, it is basically still focused on strengthening financial accounting, which is not matched with the high-quality composite and high-end accounting talents needed by society.

(2) The curriculum system is not well-established. At present, the cultivation of intelligent accounting talents in our school is in the preliminary exploration stage, lacking a complete curriculum system design concept. The cultivation of composite and high-end accounting talents that meet the social demand should focus on emphasizing mathematical foundation ability, computer programming ability, and professional comprehensive analysis ability. However, our school's accounting talent cultivation only adds a few information technology related courses such as intelligent finance and big data technology on the basis of traditional accounting core courses, rather than designing a systematic curriculum system based on social demand for intelligent accounting talents [7]. In addition, the quantity and quality of digital technology courses are seriously insufficient.

(3) The teaching staff cannot meet the requirements of the digital age. In the era of digital intelligence, the cultivation of high-end accounting talents has put forward higher requirements for teachers, because traditional accounting theory and digital intelligence technology are integrated, so teachers need to master the application logic of digital intelligence technologies such as big data and artificial intelligence in the accounting field. On the one hand, these require strengthening the teaching staff of basic disciplines such as mathematics, statistics, and computer programming, and on the other hand, composite talents who are familiar with data analysis, computer programming, and accounting majors are needed. However, in terms of the current faculty in the School of Accounting, most of them are young doctoral teachers who directly enter the podium. These young teachers have relatively insufficient teaching experience and weak theoretical knowledge. There are very few composite talents who are familiar with data analysis, computer programming, and accounting majors. The teaching staff cannot meet the needs of the digital age.

4. Suggestions for Cultivating Accounting Talents in Our School in the Era of Digital Intelligence

4.1. Adjust the Talent Training Mode in a Timely Manner based on the Adaptability of Accounting Talent Supply and Demand

Currently, with the widespread application of digital technology, such as financial shared centers, the standardization and efficiency of financial accounting processes have been achieved, reducing over 70% of manual repetitive labor; Blockchain technology enables financial data to be "tamper proof" and enhances audit credibility; The application of AIGC in financial analysis and forecasting can improve decision-making efficiency by more than 30%. Accounting work models, processes, and job requirements have undergone fundamental reshaping. The demand for traditional accounting positions has decreased, while the demand for data analysis, risk management, and strategic support positions has increased. In the era of digital intelligence, enterprises, industries, and policy levels have new requirements for the

ability structure of accounting talents, emphasizing the composite ability of "technology+profession+soft skills". Enterprises require accountants not only to have solid accounting theories, but also to have the ability to analyze data, apply AI tools, and collaborate across departments. According to Ma Yongqiang's proposal of four typical accounting talent training models in 2023, high-end accounting talent training can only match the fourth training model. However, the reality is that the demand for high-end accounting talents is out of sync with our university's talent training model. As the main battlefield for cultivating high-end accounting talents, universities must timely analyze the reasons for the mismatch between the demand for accounting talents and the talent training mode. Based on the adaptability of accounting talent supply and demand, universities should adjust and improve their enrollment, professional settings, talent training mode, etc., so that accounting talent training can meet market requirements.

4.2. Accelerate the Reconstruction of the Accounting Curriculum System

The curriculum is the core carrier for cultivating high-end accounting talents. In the era of digital intelligence, the accounting curriculum system should deeply integrate information technology content such as big data, artificial intelligence, cloud computing, etc. on the basis of traditional professional knowledge covering accounting, finance, auditing, taxation, etc., forming a cross disciplinary curriculum system of "accounting+digital intelligence technology". The transformation of talent cultivation needs to be achieved through the revision of the cultivation plan, but it is not simply a reassembly of the curriculum. Instead, it requires the rigorous integration of key knowledge points and ability development logic into a specific course through the establishment of a curriculum system based on the cultivation objectives. Taking the undergraduate accounting major as an example, it is suggested to start from the following points to reconstruct the accounting curriculum system:

(1) Retain the core courses of traditional accounting courses. The traditional accounting curriculum system aims to cultivate students' preliminary accounting and analytical abilities, mainly consisting of core courses that embody accounting thinking logic. The main core courses include basic accounting, intermediate financial accounting, advanced financial accounting, etc. For courses such as "Financial Accounting" and "Non profit Organization Accounting", they can be provided to students in need in the form of short-term courses (electives) or special lectures.

(2) Add courses on digital technology and applications. The digital technology curriculum system aims to cultivate the technical application ability, innovative thinking ability, data analysis ability, and comprehensive literacy ability of accounting students. It mainly consists of core courses that focus on the application of digital intelligence technology, including system architecture, natural language processing and data visualization, Java programming basics, big data technology, blockchain technology, machine learning, process mining, data mining, business data analysis, big data financial analysis and valuation, big data and intelligent financial decision-making, etc.

(3) The difficulty of upgrading core courses in mathematics and statistics to mathematics and statistics majors. Adjust the original course system from "Calculus" to "Mathematical Analysis" and "Advanced Algebra", while keeping other fundamental mathematical courses such as Probability Theory, Mathematical Statistics, and Econometrics unchanged. The main reason for doing so is to lay a solid foundation for students to continue learning courses such as big data financial analysis, big data enterprise valuation, and big data risk assessment in the later stage.

4.3. Strengthen the Construction of the Teaching Staff

The key to cultivating high-end accounting talents lies in the quality of teaching staff. In the context of digital intelligence technology, the transformation of accounting talent cultivation requires not only strengthening the teaching staff of basic disciplines such as mathematics,

statistics, and computer programming, but also a composite teacher who is familiar with big data analysis, the application of artificial intelligence in accounting, blockchain technology, cloud computing, and accounting majors[8]. In the era of digital intelligence, the role of teachers should be hosts and coaches. In addition to professional ability, expression ability, and teaching organization ability, teachers must also master digital intelligence technology. A good composite teaching staff is a key support for promoting the transformation of accounting talent cultivation in our school. From the perspective of educational practice, composite teachers need to possess the integration characteristics of "professional depth+technical breadth+teaching innovation ability", be able to deeply combine digital intelligence technology with subject teaching, and guide students to achieve cross disciplinary knowledge transfer and practical application.

However, our college is currently in urgent need of such versatile teachers. How to cultivate versatile teachers is a pain point and an urgent task in the cultivation of intelligent accounting talents in our college. I believe that we can start from the following points:

(1) Directly introducing high-level talents. According to the demand for intelligent accounting training in the college, we can actively introduce experts and scholars with interdisciplinary backgrounds such as numerical intelligence technology, mathematics, statistics, and accounting practice experience, promote the "Overseas Teacher Introduction Plan", and introduce overseas PhDs with artificial intelligence. These PhDs not only understand accounting and finance, but also master technologies such as big data analysis and machine learning. Directly introducing high-level talents can quickly and efficiently make up for the shortage of faculty in the college.

(2) Establish an interdisciplinary faculty team. Although directly introducing high-level talents is fast and efficient, it does not mean that composite teaching staff is a necessary prerequisite for promoting the transformation of accounting professional talent cultivation. The college can also break down the barriers of the college by forming interdisciplinary teaching teams and promoting modular course design of "professional courses+digital technology+teaching methods". For example, in courses such as "Big Data Financial Analysis and Decision Making," "Big Data Audit Analysis," and "Financial Robot Application and Development," in addition to having our own teachers as the main participants, we can also invite some teachers in statistics and computer science to join the course group, thereby enhancing the depth of technology and professional integration.

(3) School enterprise cooperation+independent teacher training. The college can establish various forms of cooperation with relevant technology enterprises: ① Establish a "dual mentor system", hire enterprise technical experts as practical mentors or participate in teacher training, enhance teachers' practical abilities through project cooperation, case studies, and other methods, and promote the integration of teaching content with industry needs; ② Co building a 'Digital Intelligence Laboratory' to involve teachers in algorithm iteration and scenario implementation; ③ Encourage teachers to participate in the design and application of new teaching scenarios such as smart classrooms and virtual simulation teaching, and enhance their ability to transform digital technology into teaching resources through the "teaching research practice" integrated project. Through this "co construction cultivation participation" learning process, ultimately establish one's own teacher training system.

5. Conclusion

With the advent of the digital intelligence era, digital intelligence technology has had a huge impact on social development, and has also brought unprecedented impacts and shocks to accounting theory and higher accounting education. The social demand for accounting talents has also undergone fundamental changes, the demand for traditional accounting personnel will

be greatly reduced, and the demand for high-end accounting talents gradually increase. The cultivation of accounting talents in colleges and universities is facing transformation and change. Colleges and universities should take social demand as the guide and cultivate urgently needed highend accounting talents. In the cultivation of high-end accounting talents, curriculum is the core carrier and teachers are the key. In order to meet the needs of high-end accounting talents in the digital intelligence era, our school is transforming and innovating the training of accounting talents. path of transformation and innovation is still a long way to go. The supply and demand of accounting talents and the training of high-end accounting talents in the digital intelligence era still need be further explored.

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