

# Research on Accounting Talent Training Mode under the Background of Blockchain Technology

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## Abstract

**Blockchain technology has an important impact on accounting work, and at the same time brings new challenges to accounting education. Based on the understanding of blockchain from different perspectives, this paper analyzes the influence of blockchain technology on accounting information system and the necessity of the reform of accounting talent training mode under the background of blockchain technology. Then, the paper reform the training mode of accounting talents from the aspects of idea renewal, specialty setting, curriculum optimization, management mode innovation and evaluation mechanism, so as to cultivate competitive accounting talents in the new era.**

## Keywords

**Blockchain technology; Education for accounting; Talent training; Integration of business and finance.**

## 1. Introduction

Blockchain technology was first born to support digital currency. It is a technology that tracks transactions in a chain way. With the evolution and development of blockchain applications, from the initial general distributed database to distributed transaction records, which are used to record transaction information in one or more organizational alliances. The function of accounting is to reflect and supervise, carrying the recognition, measurement, recording and reporting of capital movement. As the integrated application of blockchain technology plays an important role in new technological innovation and industrial transformation, the whole society has paid great attention to blockchain technology. Blockchain technology has profoundly changed everyone's life, changed the processing of invoices, contracts and documents, and will have a more far-reaching impact on accounting practitioners, financial professionals and regulators in the future [1]. What kind of accounting talents does society need in the context of blockchain technology? This urges us to rethink the existing training mode of accounting talents and how to adjust it in the face of the new environment.

The existing research on the working principle of blockchain from the perspective of technology is mainly from the aspects of cryptographic algorithm, distributed system and consensus mechanism [2]. The research on blockchain technology from the perspective of application is mainly reflected in the application in the field of finance and accounting, few articles discuss the impact of blockchain technology on accounting talent training mode from the perspective of talent training. Starting from the understanding of blockchain from different perspectives, by analyzing the impact of blockchain technology on accounting information system, this paper further analyzes the necessity of the reform of accounting talent training mode under the background of blockchain technology, and carries out the reform of accounting talent training mode from the aspects of concept renewal, specialty setting, curriculum optimization, management mode innovation, evaluation mechanism and so on, To cultivate competitive accounting talents in the new era.

## 2. Understanding of Blockchain from Different Perspectives

Students majoring in accounting must understand the basic technology of blockchain and the potential impact of blockchain technology on the future accounting profession. Therefore, it is not enough for accounting professionals to view blockchain only from the perspective of accounting. They should also comprehensively interpret blockchain from the perspectives of computer technology, economics and management.

### 2.1. Computer technology perspective

From the perspective of computer technology, blockchain is a series of complex technologies based on point-to-point network and distributed storage to achieve data consistency and provide application services on this basis. Its core technologies include distributed ledger technology, consensus algorithm, smart contract, cryptography, etc. Like other information technologies, blockchain technology is based on existing technologies. Through innovation and combination, it is a technical scheme to realize new recording methods, new management methods and new functions.

### 2.2. Economic perspective

From the perspective of economics, blockchain is a value Internet that improves the efficiency of cooperation by reducing the cost of cooperation. Based on the Internet TCP / IP basic protocol, it uses the encryption and authentication technology of cryptography, integrates the Internet distributed technology, improves the efficiency based on the algorithm, and realizes the Internet from informatization to value.

### 2.3. Management perspective

From the perspective of management, blockchain is a management paradigm of decentralization and trust consensus. In the traditional sense of trust building, in the case of asymmetric and opaque information, it is generally necessary to introduce a third party to form trust accumulation. In the blockchain, due to the high transparency of the database and the free participation of independent individuals, there is no need to introduce a third party and trust accumulation. Instead, it registers the account book point-to-point through a certain contract mechanism, carries out data transmission and information authentication independently, so as to form the management paradigm of trust mechanism in the decentralized state.

### 2.4. Accounting perspective

From the perspective of accounting, blockchain technology is an accounting technology, because it is related to the transfer of asset ownership. It can reduce the bookkeeping cost and reconciliation cost and provide effective vouchers for the transfer of asset ownership. Blockchain is a distributed ledger or recording system that combines the sequence of data blocks into a chain structure and uses cryptography to ensure the security of data content, so as to solve the problem of trust. The characteristic of this recording method is that the data information is registered in sequence. After reaching the specified threshold, the data is packaged to form blocks, which are linked with the previous blocks to form the input and output process of a unified data chain. Blockchain technology can greatly reduce transaction costs and become a recording system for all transactions [3].

It can be seen that blockchain integrates a series of complex computer technologies and the general laws of management and economics as a platform for providing trusted services. Driven by technological innovation, blockchain technology can be applied to different types of industries and institutions. Various industries and institutions can use blockchain technology to form a "blockchain +" application innovation model.

### **3. Impact of Blockchain Technology on Accounting Talent Training**

Blockchain technology not only has a far-reaching impact on our economic activities, but also has an important impact on accounting, the information carrier of economic activities. Facing the rapid development of blockchain technology, accounting academia and practitioners have joined the tide of strategic planning and application technology research and development of blockchain technology application, which indicates that blockchain technology will promote the reconstruction of accounting information system and lay the foundation for the reform of accounting work in the future. The content and mode of accounting education are affected by the development of blockchain technology.

#### **3.1. Blockchain technology promotes the deep integration of industry and finance**

Based on the characteristics of tamper proof, joint maintenance, decentralization and distrust of blockchain technology, the development of blockchain technology provides opportunities and challenges for accounting practitioners in the new era. In current accounting practice, the financial department has the authority and trust of the accounting profession and implements centralized control over accounting and accounting information disclosure. The accounting mode based on blockchain technology has changed, and accounting has extended to the business end. When a transaction occurs, it is triggered through a smart contract and processed in real time on each node. Only after all nodes confirm the loaded block, it is broadcast to all nodes, and the initial bookkeeping is completed by the accounting entity node. Accounting is no longer limited to the financial department. Other nodes in the alliance chain (such as upstream and downstream enterprises, banks, tax authorities, etc.) form consensus algorithms for business information, accounting information and audit information under the constraints of smart contracts, which can realize real-time authentication. It has opened up the information island from the business end to the financial end and then to the financial information disclosure, which not only eliminates fraud, but also greatly improves the efficiency of accounting work, highly decentralized and distrusted, promotes the integration of industry and finance, and realizes the pursuit of "overall picture" and "efficiency" of accounting and audit work. Under the background of the integration of industry and education, the professional structure of accounting in Colleges and universities needs to be optimized and adjusted.

#### **3.2. Improve the quality of accounting information blockchain technology**

From the perspective of accounting methods, the application of blockchain technology will change the recognition, measurement, recording and reporting of accounting, and the result is to improve the quality of accounting information. From the perspective of accounting recognition, blockchain technology overcomes the subjective judgment and manipulation of Accountants in traditional business processes, and is more in line with the requirements of objectivity. From the perspective of accounting measurement, blockchain technology provides good technical support for the fair value measurement attribute, which makes the accounting information more in line with the requirements of timeliness and comparability, and is conducive to the improvement of the quality of accounting information. From the perspective of accounting records, the distributed bookkeeping of blockchain makes the workflow of accounting data generation, acquisition, recording, transmission and analysis automatic and information-based, standardizes the accounting processing process and improves the accuracy of data. From the perspective of financial reporting, blockchain technology breaks through the traditional accounting stages. The period of accounting statements is no longer limited to monthly and annual. The report data can meet the immediate needs of users and help accounting information users make analysis and decisions efficiently and accurately [4].

### **3.3. Blockchain technology improves accounting supervision function**

There are some problems in the internal supervision of accounting information, such as information distortion, unclear rights and responsibilities, poor supervision and so on. Distrust and decentralization of distributed accounts are two valuable features of blockchain. Blockchain technology is based on cryptography. By eliminating trust and dependence on third parties, it fundamentally prevents many management risks, avoids trust crisis and management crisis, and gives better play to the supervision function of accounting. There is no centralized node and pyramid level on the blockchain, the accounting process is transparent, the information asymmetry is reduced, and various agency problems such as management fraud or tunnel excavation are solved [5]. Blockchain technology realizes real-time and verifiable data, which provides the possibility for the timeliness of internal and external supervision, makes it possible to verify the data in real time, and the frequency of supervision and inspection has changed from regular inspection to inspection at any time, which will have a restraining effect on the problem of man-made corruption.

### **3.4. Impact of blockchain technology on accountants**

Using blockchain technology may reduce the workload of Accountants in accounting, accounting records and accounting storage, greatly reduce repetitive tasks, and shift the focus of accounting work to higher-level work contents, such as evaluation and planning, appraisal and judgment. The changes in the content of accounting work that may be brought about by new technology put forward higher requirements for accountants and employees, and the nature of work is more challenging.

## **4. Reform of Accounting Talent Training Mode under the Background of Blockchain Technology**

### **4.1. Renewing the concept: implementing the supply side reform of accounting talents in the new era**

To cultivate high-quality accounting talents, we should first change our ideas in terms of educational ideas. The concept of talent training of colleges and universities and college teachers is the leading factor of talent training mode. The concept guides action, which directly affects the structure and innovation of talent training mode. The concept of accounting talent training is the wind vane and baton of accounting talent training. Under the background of blockchain, the rapid change of science and technology and the rapid development of artificial intelligence have had a great impact on the traditional accounting work. In the transformation of accounting, the accounting work has undergone earth shaking changes in personnel structure, work content and boundaries. The development of technology and the transformation of accounting call for the reform of accounting education. The idea renewal of colleges and universities and their teachers is imminent. Colleges and universities and accounting teachers need to rethink how to cultivate competitive accounting talents in the new era in combination with the background of the times, so that they can cope with the new environment and challenges.

Accountants can remain competitive only if they master blockchain technology [6]. More and more people realize that the traditional accounting education model based on the industrialization era can no longer meet the needs of accounting talent training in the new era under the background of blockchain, which puts forward new requirements and great challenges to colleges and universities and accounting teachers. Colleges and universities and accounting teachers need to think deeply about the following issues: how to revise the accounting talent training program that keeps pace with the times, how to optimize the curriculum system that reflects the integration of industry and finance, how to give full play to

the innovation of the teaching management mode of integrity and innovation, and how to build a teaching evaluation system with feedback mechanism. Therefore, only by renewing ideas, in order to solve the disconnection between the supply side and the demand side of accounting talent training.

#### **4.2. Specialty setting: talent training program keeps pace with the times**

In the context of blockchain, students are faced with massive resources. The training goal of accounting talents is to acquire two skills through learning: first, learn the method of acquiring knowledge, that is, know where to find the resources of required knowledge. Second, learn how to make effective use of resources, that is, develop the ability to comprehensively create knowledge. Accounting talents need to organically integrate accounting knowledge, professional level and personality quality, and have the ability to solve complex financial situations under the guidance of correct thinking mode.

According to the background of the times, it is urgent to revise the training plan of accounting talents. According to the current situation of blockchain development and the reality of Finance and Economics Majors in various colleges and universities, it is necessary to determine the reasonable positioning and training characteristics of accounting majors. The training program of accounting talents in the new era should integrate blockchain technology into general education, reflect the integration of industry and finance in practical education, and pay attention to the cultivation of students' comprehensive ability, including data processing and theoretical analysis ability, learning comprehension and knowledge integration ability, written expression and communication ability, cooperation and coordination and team leadership ability explore the cultivation of creativity and professional ethics. The training of accounting talents in the context of blockchain should pay more attention to data management, data analysis, data mining and the transmission of management information knowledge. At the same time, combined with the actual situation, the accounting majors of some colleges and universities accept the students who have been diverted from their majors after enrollment, and set up personalized talent training programs for the students who have changed their majors, so as to solve the problem of rational allocation of class hours of professional basic courses and professional compulsory courses after the diverted students have changed their majors.

#### **4.3. Curriculum optimization: the curriculum reflects the integration of industry and finance**

With the proposal of the concept of cultivating innovative talents in the new era, the curriculum should meet the needs of comprehensive, harmonious and personalized development, so as to lay a good foundation for the development of cultivating innovative talents.

In terms of course content optimization, pay attention to the establishment of interdisciplinary courses reflecting the integration of industry and finance. Interdisciplinary elective courses can be adopted, or interdisciplinary courses can be developed directly. Vigorously improve the course quality, further improve the depth and cutting-edge of accounting courses, and integrate discipline research thinking and research methods into the course content. We can try to develop blockchain courses to be cross listed in the field of accounting, and provide professional elective courses to all undergraduate and graduate students of economics and management in Colleges and universities.

In terms of curriculum structure optimization, professional compulsory courses are appropriately reduced and professional elective courses are appropriately increased. Further optimizing the curriculum structure can better meet the needs of students' personalized learning. Comprehensively introduce a series of elective courses on digitization, help students understand the basis of big data and the application scenario of big data in finance through

teaching design and content integration, learn and master the basic methods of data processing through experimental teaching, deeply mine data, and introduce typical application cases, so as to ensure that students can fully explore the subject categories, It also meets the students' free choice according to their own needs under the background of industry finance integration.

Specifically, we can try to provide a "blockchain accounting" course of "emerging accounting technology"[7], which emphasizes the application of blockchain technology in internal control and accounting. In terms of learning objectives, students are required to understand the definition of blockchain, basic knowledge of blockchain and its operation principle, explain the relationship between blockchain, distributed account book and shared account book, describe how smart contract works, and evaluate the feasibility of blockchain technology application cases, be able to develop an application of blockchain in the field of accounting and auditing and write smart contracts.

#### **4.4. Serving students: innovation of teaching management mode**

We should establish a student-centered management thought and effectively promote the reform of teaching management mode. In terms of teaching management system, colleges, departments and teaching and research offices, as grass-roots units, take their own responsibilities in teaching activities and play an important role in teaching management reform. They should give full play to the overall planning and coordination relationship between departments at all levels, and give full play to the subjective initiative of the supply side of talent training. At the same time, give students the space to realize personalized learning, and introduce mechanisms such as interdisciplinary teaching research between teachers and students, industry university cooperation and collaborative education projects, so as to truly do everything for students and students.

#### **4.5. Feedback mechanism: reasonable construction of teaching evaluation system**

The main purpose of teaching evaluation is a mechanism to further improve teaching quality in the form of feedback, adjustment and correction. A reasonable teaching evaluation mechanism is conducive to the improvement of teaching quality and the realization of talent training objectives. The evaluation system should have both the evaluation feedback mechanism for teachers and the evaluation mechanism for students. On the one hand, the evaluation of teachers should fully consider the trade-offs of scientific research, teaching, social services and other aspects. On the other hand, we should give full play to the role of process evaluation system and non standardized comprehensive evaluation system. The evaluation system for students should strengthen process control and pay more attention to the performance in the process of daily learning. The evaluation results should comprehensively consider the examination, homework, experiment, classroom interaction, classroom participation, etc. Assessment forms should also be more diversified, make full use of Internet technology and platform resources, and give a more accurate and reasonable evaluation of students' actual performance.

### **5. Conclusion and Prospect**

Talent is the foundation of a strong country, and talent is the basis for the development of accounting . As the supply side of accounting talents, colleges and universities should actively carry out the reform of accounting education in accordance with the characteristics of the times in the face of the impact and challenges brought by the progress of science and technology and the changes of the times. Starting from the understanding of blockchain from different perspectives, this paper analyzes the impact of blockchain technology on accounting information system, puts forward the necessity of the reform of accounting talent training

mode under the background of blockchain, and expounds the ways of the reform of accounting talent training mode from the aspects of concept renewal, specialty setting, curriculum optimization, management mode innovation, evaluation mechanism and so on.

At the same time, we should also realize that the new characteristics of the times put forward higher requirements for accounting education, rather than completely abandoning the traditional accounting education. The more the economy develops, the more important the accounting is. The more accounting develops, the more society progresses. The continuous development of science and technology will inevitably lead to changes in accounting work. As the supply side of accounting talent training, colleges and universities should timely change their ideas, revise the training plan, optimize the curriculum, innovate the management mode and construct the evaluation mechanism, so as to cultivate competitive accounting talents in the new era.

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