

# Research on the Application of Blockchain Technology in the Audit Work of Higher Vocational Colleges

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**Abstract:** As one of the emerging technologies in China, blockchain technology was first used in the financial industry. Owing to the deepening reform in the field of education in China, the construction scale and number of colleges have been increasing, and the financial sources have become more and more extensive and complex. Applying blockchain technology to the audit work of vocational colleges can effectively enhance the efficiency and quality of audit work. Based on this, this paper analyzes and studies the movement of blockchain technology in the audit work of vocational colleges, hoping to provide reference for vocational colleges to enhance the audit work through this technology.

## 1. Introduction

Blockchain technology mainly refers to dividing the whole transaction process into different nodes, and each participant is treated as a node for data sorting and storage. Then, with the continuous increase of data information, blocks are gradually formed. The data information and transaction records of each block will be broadcast throughout the network to notify all the participants in the transaction. Only after the participants confirm the data information can they link to the main body. Blockchain technology has five characteristics: decentralization, openness and transparency, non-tampering, anonymity, and self-management, which can maximize the fairness and objectivity of transactions. Applying it to the audit work of higher vocational colleges can save audit costs and reduce economic risks, which is positively significant for the better progress of colleges.

## 2. Application Significance of Blockchain Technology in the Audit Work of Higher Vocational Colleges

The application of blockchain technology in the audit work of colleges is conducive to the implementation of audit. College auditors can obtain data information through the implementation of blockchain technology, and conduct remote supervision and effective review of activities held by higher vocational colleges through the network platform <sup>[1]</sup>. This not only effectively saves the audit cost of colleges, but also can maximize the efficiency and quality of audit work. In the actual audit process, the blockchain technology can transmit the data information generated by each transaction of colleges and universities to the audit terminal in real time, and then verify and audit through the nodes on the blockchain. After ensuring that the data information is true and correct, it is judged as valid data and uploaded to the block. In this way, once data information is tampered with, it will inevitably leave traces of information, and relevant auditors will be able to monitor the economic activities of higher vocational colleges in real time through blockchain technology, thereby improving the authenticity of data information.

The application of blockchain technology in the audit work of colleges is also conducive to continuous audit <sup>[2]</sup>. In the blockchain system, all processes and audit structures of the audit work can be completely recorded and saved. When higher vocational colleges are carrying out new audit activities, if they need to query the previous audit data for comparative analysis, they can use

blockchain technology to access data information and promote the constant progress of audit work. The constant audit work in colleges can reduce the economic risk problem to the maximum extent and promote the sustainable and healthy progress of colleges.

The application of blockchain technology in the audit work of colleges is also conducive to automatic audit <sup>[3]</sup>. With the innovation and progress of blockchain technology and its characteristics of openness, transparency and non-tampering, it can ensure the fairness and justice of the audit work in colleges, and promote the work functions of auditors to become irreplaceable. In this way, the authenticity and accuracy of data information can be guaranteed, and the problem of data information falsification can be avoided. The application of blockchain technology in the audit work of colleges can also automate the review and disposal of some repetitive work, thus realizing the automatic audit of colleges.

### **3. Application Strategies of Blockchain Technology in the Audit Work of Higher Vocational Colleges**

#### **3.1 Establish and Enhance the Early Warning Mechanism**

Higher vocational colleges should establish and perfect the early warning mechanism if they want to deeply apply and effectively use blockchain technology in audit work. At this stage, in the online audit work of higher vocational colleges, the audit early warning mechanism is not for real-time supervision and management <sup>[4]</sup>. The audit alert mechanism is generally used by auditors to set the alert range and degree of audit data in the stage of data collection. If the alert range is exceeded in the actual data collection process, an alert will be sent to the auditors to remind them that the data information is abnormal. Although this can effectively detect the wrong data information and risk problems in the audit work, because it is not real-time monitoring, and the early warning mechanism needs to be set by the auditor, this not only increases the workload of the auditor, but also leads to the non-objective early warning mechanism, which has certain loopholes. Therefore, the audit department of higher vocational colleges should use blockchain technology to establish and enhance the early warning mechanism. When the blockchain finds abnormal information in the process of data collection and upload, the information will be published to each participant in the blockchain, and the participant needs to confirm the data information. If the data information is approved by all participants, a new chain can be formed to continue to upload to the network, and its modification and confirmation will be comprehensively recorded. If the information is not confirmed, the blockchain technology will judge it as invalid information, and invalid information will not be able to enter the chain area. Blockchain technology can audit and monitor data information in audit work in real time, and can automatically judge and process abnormal data, thus effectively enhancing the quality and efficiency of audit work in colleges.

#### **3.2 Enhance the Audit Process of Higher Vocational Colleges**

First of all, in the audit preparation stage, all departments of colleges can act as the audit department, and need to go into the blockchain network environment, use data sharing to review and confirm the data information in the audit work, and finally upload it to the blockchain platform <sup>[5]</sup>. Blockchain technology can effectively supplement and record the acquired information by reviewing the actual situation, progress goals, accounting policies and other relevant factors of the school, and then record the purchase data of colleges in detail through the unique timestamp function of blockchain. Colleges can also manage their fixed assets and intangible assets with the help of blockchain technology, which can minimize the time cost and human cost. Secondly, in the implementation stage of the audit work, the audit department should use the blockchain technology to collect and enhance suppliers, bank transaction records, tax payment records, etc. for each transaction generated by higher vocational colleges, and make full use of the consensus mechanism to enhance the authenticity of transaction records. In the specific verification process, if there is any inconsistency with the functional verification results, the audit department should use the blockchain technology to trace big data and call the original voucher records. In this way, it can

effectively prevent auditors from making judgments through subjective consciousness, thus improving the scientific and normative nature of audit work in vocational colleges. Finally, in the reporting stage of the audit work, the audit department of higher vocational colleges should use blockchain technology to record and specifically detect the audit results in real time. In addition, the audit department should also make use of the work content related to financial funds of various departments of low vocational colleges with blockchain technology to conduct real-time and comprehensive supervision, thereby improving the accuracy of the audit work of vocational colleges and reducing risk problems.

### **3.3 Continuously Promote the Innovative Progress of Audit Work**

If higher vocational colleges want to effectively use and apply blockchain technology in the audit work, they should also continue to push the innovative progress of audit work, adhere to the centralized collection of data information, management work and real-time sharing with the blockchain, which can effectively enhance the quality and efficiency of higher vocational colleges' audit work. First of all, the audit department of colleges should enhance and innovate the audit data center <sup>[6]</sup>. By using blockchain technology, we will actively build an audit platform for higher vocational colleges and enhance relevant data application modules, so as to maximize the authenticity, accuracy and security of audit data information. In this way, we can effectively reduce the audit efficiency due to data information errors, and thus bring economic risks to colleges. Secondly, the audit department of higher vocational colleges should also adhere to the principle of giving consideration to both sustainable progress and security, and constantly optimize the storage and sharing of data information by taking advantage of the non-tampering nature of blockchain technology in the actual audit work. This can effectively enhance the security of audit work in higher vocational colleges, and then lay a good foundation for future audit work.

### **3.4 Enhance the Professional Level of Auditors**

As the main participants in the audit work, the professional level of auditors determines the efficiency and quality of the audit work in vocational colleges to a certain extent. Therefore, if colleges want to effectively apply and use blockchain technology in audit work, they should also enhance the professional level of auditors. First of all, auditors of higher vocational colleges not only need specific and solid audit knowledge, but also should form a keen information sensitivity, so that they can timely find abnormal data information in the audit work, thus ensuring the smooth and effective implementation of the audit work of colleges <sup>[7]</sup>. Therefore, the audit department of colleges should actively organize and carry out blockchain technology learning and training activities, help auditors master certain blockchain technologies, and encourage auditors to apply the learned technical knowledge to the actual audit work. Secondly, the audit department of colleges should also enhance the welfare treatment of talents, expand recruitment channels, and recruit more professional talents with professional audit knowledge, audit ability and innovative thinking to participate in the audit work. In this way, the blockchain technology can be deeply applied in the audit work, thus promoting the smooth progress of the audit work in colleges.

## **4. Conclusion**

To sum up, with the continuous increase of the construction scale and number of higher vocational colleges, their financial sources are becoming more and more extensive and complex. It is very necessary to apply blockchain technology to the audit work of higher vocational colleges. This can not only effectively enhance the efficiency and quality of audit work, but also avoid the progress of economic risks to the maximum extent. Therefore, higher vocational colleges should pay full attention to the significance and value of blockchain technology, and deeply apply blockchain technology to audit work by establishing and improving the early warning mechanism, improving the audit process, improving the professional level of auditors, promoting innovation and progress and other measures. Only in this way can we effectively optimize the audit process and further promote the sustainable and healthy progress of colleges.

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