Research on the Application of Computer Audit in Colleges and Universities

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Abstract. Due to the uncertainty of audit environment and audit work, the development of audit software in colleges and universities in China has been troubled for many years, but in recent years there has been a breakthrough and significant progress has been made. At the same time, with the rapid development of information technology and the increasing popularity of accounting computerization, audit means have gradually transferred from traditional manual audit to computer audit. To carry out computer audit has become an urgent task faced by audit institutions and auditors in colleges and universities in China[1].

Keywords: Computer Audit, Higher Learning, Financial Audit, Management Innovation

1. Introduction

At present, China's institutions of higher learning have achieved great success in the development of audit law retrieval system and audit information management system, and have developed a number of audit information management system and audit office automation system. For example, the computer technology center of the national audit office, the general office of the state council and the Sichuan provincial audit office jointly developed the computer aided office system for government organs, which has the functions of document drafting, examination, issuance, collection, classification, filing, inquiry and classified management. The system has been widely used in audit institutions across the country. At the same time, the successful development and use of a variety of industry audit software has greatly improved the efficiency and depth of industry audit.

2. Current situation of computer audit in colleges and universities in China

2.1. Preliminary results have been achieved

Computer audit refers to the audit of computer information system and the use of computer aided
audit, computer audit in a broad sense, including other applications of computer in the field of audit\(^\text{[2]}\). At present, computer auditing in colleges and universities in China is still in its initial stage, but in recent years, with the development of information technology, it has achieved initial results.

In order to cultivate more talents, the audit office has conducted special training on how to use data acquisition software, what channels to collect electronic data, and how to convert the data into the format needed for auditing, and on a series of specific tasks such as query and man-machine interface. According to statistics, more than half of the country's 70,000 auditors have passed the computer basic and skills training exam and nearly 1,000 have passed the computer audit intermediate exam, and have become the backbone of the computer audit\(^\text{[3]}\).

### 2.2. Main problems of computer audit in institutions of higher learning in China

Despite the rapid development of computer auditing in colleges and universities in China in recent years driven, it is still in the stage of learning and exploration in general, and there are still many problems, mainly including:

#### 2.2.1. Lack of competent computer audit personnel.

Computer audit is an interdisciplinary subject of accounting, auditing, information system, network technology and computer application. To carry out computer audit requires auditors to have a compound knowledge structure. They should master not only the knowledge of accounting and auditing, but also the information system, computer and network technology. But colleges and universities in our country now is the lack of computers with compound knowledge structure of competent auditors, most of the auditor is not familiar with computer is how to carry out the economic and accounting business process, don't know what computer processing and application of network technology, how to control can effectively reduce the risk of these risks, nor to master how to audit the computer information system audit or using a computer and network technology. The pyramid structure of education and teaching as shown in Figure 1:

![Pyramid structure of university teaching management](image-url)
As shown in figure 1, although computer technicians are familiar with computer and network technologies, they are not familiar with accounting and auditing knowledge, and do not know what to audit and how to audit.

2.2.2. Regulations and standards related to computer auditing need to be further improved. Computer audit is only a means of audit, the same as manual audit, computer audit must be carried out in accordance with the law. But at present in the computer audit the audit institution's power, the responsibility and the auditor’s duty and so on the related laws and regulations are far from perfect; Some laws and regulations related to e-commerce, network economy and computer application are even completely blank, such as the legal effect and preservation requirements of electronic vouchers, electronic contracts and digital signatures, as well as the identification of digital certification bodies and their legal responsibilities. The structure shown in figure 1 can be simplified to figure 2 by using big data technology:

![Figure 2. The simplification of university audit under the background of big data](image)

To carry out computer audit, the computer information system is required to have an audit interface so as to obtain the electronic information of the system under audit through the interface and conduct relevant audit processing[4]. Although the financial and management software branch of the software association of colleges and universities in China has put forward standard requirements for the data interface of financial software, many financial and management software have not been implemented. Most of the existing computer information systems in institutions of higher learning in China do not have an audit interface, and some systems have added more databases, making the audit software unable to access the system data. The acquisition of electronic data has become the bottleneck of computer-aided audit. In addition to the lack of audit interface in existing information systems, what is more worrying is that most of the e-government systems and enterprise management systems being developed do not consider the audit interface.

3. The development direction of computer audit in colleges and universities in China

3.1. Strengthen personnel training and personnel training

To promote the development of computer audit, we must strengthen the training of computer audit
personnel. In terms of personnel training, it is necessary to make an overall plan for the training of ordinary application talents and high-level talents, on-the-job personnel training and future personnel training. For ordinary on-the-job personnel training focus, in addition to the general operation, word processing, spreadsheet software should concentrate on the application of computer aided audit technology, including the use of the audited units of the computer information system, the EX C E L assisted audit and audit software technology and methods, and gradually in time to join the computer information system and network security issues, the relevant control and audit, etc. High-level personnel training can focus on the development and audit of information systems, system function or application program audit, network security audit and audit software development and other aspects. For the future training of auditors, colleges and universities should add information technology and e-commerce to the teaching plans of accounting majors, and make computer auditing a required course[5].

3.2. Further improve the regulations and standards related to computer auditing

First of all, legislation related to e-commerce and the network economy should be strengthened to ensure that there are laws to be followed in computer auditing. Institutions of higher learning in China should formulate laws and regulations on e-commerce as soon as possible to clarify the legal effect and custody requirements of electronic vouchers, electronic contracts and digital signatures, the management of digital certification bodies, the security of electronic information and network systems and other relevant issues in the form of laws and regulations. The legislation on e-commerce and network economy should be based on the national conditions of China's universities and colleges, and at the same time refer to the international model law or other relevant laws and regulations.

In addition, the regulations and standards related to computer auditing should be further improved. The audit institutions and auditors shall have the right to review the functions and security measures of the computer information system under audit, and shall have the right to use the network and audit software for audit. The audit institutions shall give active assistance to the computer audit of the auditors. In terms of auditing standards, it may be considered to supplement the standards or norms of computer information system auditing and network auditing.

3.3. Vigorously develop and optimize audit software

To promote the development of computer audit, an important task is to improve the quality and practicability of audit software in institutions of higher learning, and the key is to develop and optimize the software. Software developers must go deep into the audit work - line, audit software analysis and design to have experienced auditors. Audit of colleges and universities in our country existing software is in use and improve the process of the prototype, only strengthen the communication and connection between users and developers, to allow users to the problems found during the use and improvement suggestion timely reflect to developers, developers can widely collect user feedback, better come to the conclusion that the algorithm model of audit, the audit software can optimize improve, really can be a useful tool of the audit.

4. Conclusion

The development of information system audit is accompanied by the development of information
technology. Many information systems in colleges and universities in China have no audit interface, so the audit software cannot obtain the electronic data of the system[6]. The lack of data interface has become a shackle for colleges and universities in our country to use computer aided audit. The information management department and the audit department should strengthen the supervision, and force each unit to provide the data interface for the economic supervision department when developing and using the computer system involved in the economic and accounting business processing, so as to facilitate the application of computer-aided audit methods and the smooth implementation of the audit information construction in the future.

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