

Research on University Accounting Teaching Innovation Based on big data

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Objectives: With the arrival of the era of big data, the use of cloud computing technology has the characteristics of large capacity, variety and speed. Big data makes the teaching of financial accounting more convenient and efficient. **Methods:** It is an effective way to realize the goal of modernization of education in China by paying attention to the development and application of the reform of accounting teaching in Universities under the educational technology of big data. **Results:** This paper from the transformation of the university accounting education concept, in the era of big data under the background of accounting education in Colleges and universities how to give full play to the advantages of cloud computing, cloud platform construction of accounting education, then explore the reform of accounting education mode of. **Conclusion:** Therefore, this paper from the perspective of big data technology background, starting from the reform of the teaching mode of accounting and accounting industry background, considering the direction from the accounting personnel training, put forward the corresponding countermeasures for accounting teaching methods and teaching contents, promoting college accounting teaching reform.

Keywords: big data; colleges and universities; financial accounting; teaching

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With the rapid development of information technology, people's life is full of all kinds of "data". Throughout the definition of large data at home and abroad, big data refers to the current conventional software in a certain reasonable time cannot be collected, stored, analyzed, processed or converted data set¹. It consists of structured data and unstructured data, while unstructured data is the major one in big data era. In view of the many characteristics of big data, in order to give full play to the role of big data, it needs to adopt the calculation model, and cloud computing as a new network infrastructure, provide a foundation platform for large data collection, storage, and analysis, call²⁻³. As the cradle of Accounting Education -- the promotion of cloud accounting

professional accounting personnel, how to adapt to the era of big data trends, the use of cloud computing, the reform of the traditional accounting education concept and mode, cultivate talents of comprehensive accounting requirements of the times, this is a major issue⁴.

Big Data Oriented Accounting Industry Change

Emerging information technology, such as big data, is developing rapidly, bringing new changes to the entire financial sector⁵. The method of financial management in the past has not been able to meet the needs of enterprises; enterprises need to adopt more efficient financial process, using a large data accurate and timely analysis of the allocation of enterprise resources, so that enterprises can obtain safe and fast growth of

benefits. In the increasingly fierce competition in the market, enterprises should pay attention to the efficiency and economic efficiency of investment, and improve the decision-making and evaluation system of the supervision department⁶. In big data, enterprise's financial information more transparent, to control the financial cost of the use of big data, will obviously increase the economic benefits for the enterprise; the data is inevitable in the current business method of cost management. In the context of big data, the financial department through the classification and analysis of large data for the enterprise financial accounting provides more real-time dynamic data collation, can bring benefits to enterprises, improve value-added benefits.

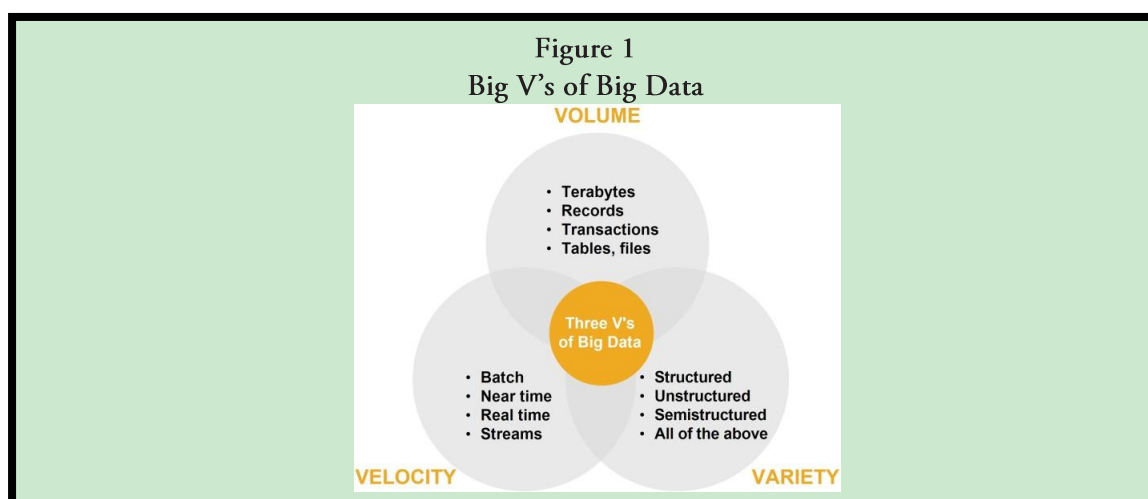
Big data in the current is not a simple auxiliary tool; it has gradually formed the core of the enterprise assets, data evaluation methods are also urgent to upgrade. The introduction of big data will gradually improve the level of automation of enterprise financial accounting and the docking of various businesses, and improve work efficiency for accounting work⁷⁻⁸. We should use more data, such as big data analysis, to obtain more financial information, better realize the allocation of resources, improve the quality of information, and use the ability to carry out financial management, risk control and value

creation.

Reform of Educational Mode in Big Data Era

In today's society, the big data model, the data is complex and diverse, on the network for each data sharing. In the teaching of financial accounting, the feedback and integration of teaching data break the traditional teaching space⁹. Through the data network platform, providing open exchange platform for teachers and students to learn from each other, the use of network information and the development of data online, but also to the financial accounting teaching method of Chinese traditional challenges, therefore, in the big data era, keep pace with the times, carry out reform of the traditional financial accounting teaching.

In today's information world, data are spewing out in large volumes of data sets, presenting trends in complexity, diversity, and knowledge sharing. Data collection, integration, analysis, mining technology development rapidly, by professional teaching information system in the teaching of history data and feedback data capture, analysis, combination, preparation form will become the high quality curriculum, traditional education in space, time, teachers and other obstacles will be broken. Figure 1 shows Big V's of big data.



“MOOC”, Khan College, “flipped classroom”

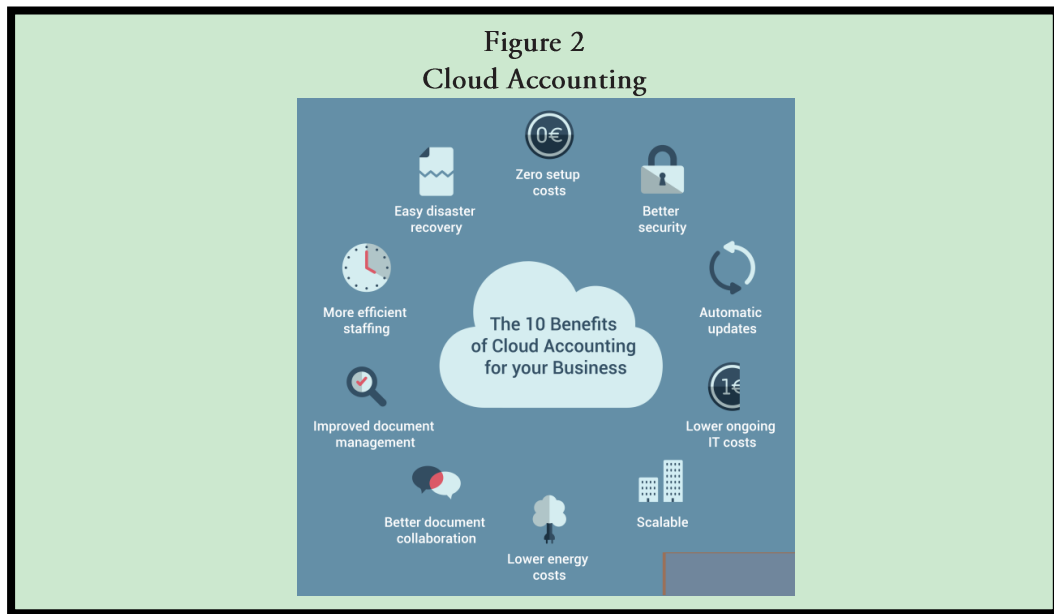
and other new online education models and teaching methods have developed rapidly. Self-

access learning and instant education have been carried out in some educational training institutions¹⁰. The open network teaching platform will promote the smooth communication between students, teachers and students, teach students in accordance with their aptitude, interactive teaching, and collaborative learning, stimulate innovation and other more scientific and rational teaching methods can be expected to achieve. This trend of data and on-line development poses a severe challenge to the traditional educational models and methods in china.

METHODS

Traditional accounting education concepts,

especially higher vocational education, mainly focus on training accountants who are competent for accounting related jobs and complete routine accounting work. Do they face huge amounts of data, and to the use of cloud accounting collection, mining, analysis and processing of large amounts of data, cannot provide sufficient data to support the users of accounting information under the era of big data, may even mislead the decision of information users¹¹. At the same time, the data quality of teachers is not high. Most of the Faculty of Accounting Specialty in universities and colleges are trained in the traditional accounting education mode. Cloud accounting is shown in figure 2.



is not grasp and use the new accounting information of cloud accounting, and are not familiar with data mining and analysis software. Therefore, we must change the concept of education, train a high data quality accounting teachers, and lay the foundation for training comprehensive accounting talents. There are lack of infrastructure for accounting education in Colleges and universities. The existing infrastructure of accounting education in Colleges and universities, such as the number of laboratories, can only meet the requirements of the general accounting computerization courses. In the software, the computer is configured as general financial software such as idea. On the one

hand, these software are often unable to receive timely updates and lead to actual work and exercise for docking; on the other hand, the conventional software mainly deal with the accounting for a small amount of structured data, unstructured data for a large number of calls, mining, analysis is insufficient.

The traditional accounting education model faces challenges. Firstly, the curriculum is unreasonable. Most of the current college accounting education curriculum system is the theory and practice of light weight, especially set up theoretical courses of intermediate financial accounting professional, completely out of touch with the use of large data cloud accounting; and data related to practical courses such as network retrieval and database etc. the main course for structured data analysis, no analysis of corresponding courses for non-mining structured data; curriculum schedule is not reasonable, the main period of pure knowledge professor. The students who are trained in this course tend to be more theoretical and less capable of editing, processing and computing large data. Secondly, the teaching model does not take advantage of cloud computing. First of all, most of the current accounting teaching design mainly depends on the textbook and primary multimedia teaching, curriculum resources website teaching materials, most scattered, rough, incomplete, poor timeliness, it is difficult to achieve the goal of teaching; teaching organization, basically take the initiative to teach the teacher, students passively accept the case, old, unable to stimulate the enthusiasm of the students, ability of cooperation between the students; examination teaching effect on the after-school practice in Accounting Teaching in Universities of traditional examination, at the end of the way with teaching experience and limited testing to evaluate the teaching effect of the monitoring methods with distinct lag, not full of modern science and technology advantages, not objective but it is not accurate enough.

The Reform Path of Accounting Teaching

Big data trigger the reconstruction of financial positions and their ability requirements and

disruptive changes in teaching mode. It will inevitably lead to a chain reaction in accounting teaching¹². As the accounting personnel training institutions, colleges and universities, we should pay close attention to and analyze the development trend of big data, estimate the change of social accounting requirements and demand and update the teaching mode, timely adjustment of teaching, laboratory teaching plan, from the curriculum, syllabus, teaching methods, teaching resources, training equipment, software platform and teaching practice research base, occupation and other aspects to reform, the construction of high quality and high adaptability of the accounting profession, the realization of "financial" teaching, and social needs of smooth convergence.

Clear Personnel Training Objectives, Improve Data Literacy

Based on the background of big data, accounting education in Colleges and universities must change the idea, clear objectives: to cultivate students' accounting ability as the foundation, the interpersonal relationship training, supplemented culture by means of modern technology, the accounting management ability as the core, culture is suitable for the development needs of the times comprehensive accounting personnel. The students when faced with massive data, the ability to analyze the data using data mining software, improve the cloud accounting system and actual operation ability, enhance students' knowledge of accounting service enterprises management ability.

First of all, practical training, exchange training and multi cooperation can be used to strengthen technical training and improve the data analysis and processing ability of teachers. Secondly, on the basis of improving data literacy, vigorously carry out scientific research activities of university accounting teachers, and enhance scientific research ability [13]. Encourage accounting teachers to use modern technology, interdisciplinary, inter institutional cooperation research topics, contribute to social development. Third, the introduction and storage of outstanding comprehensive talents, accounting

teachers to achieve mutual assistance and mutual learning, so as to train a data age accounting education teacher team. Finally, the corresponding evaluation mechanism should be established to assess all aspects of the teacher's grasp. Only in this way, college teachers can cloud accounting resources and new technology and knowledge system of accounting theory and the introduction of the teaching, the big data requires a combination of teaching methods and reform teaching objectives, to promote the discipline innovation and development.

Because of the promotion of enterprise financial automation level and the improvement of enterprise strategic decision and financial analysis support requirements, the polarization of enterprise financial personnel has been brought into being, and the quality requirements are greatly different. Due to the lower quality requirements, only the basic professional knowledge and simple professional skills of the front-line accounting personnel training will be vocational, technical schools, social training schools and other institutions. Intermediate financial is personnel responsible for the maintenance, computer, database and financial system in business docking, template development, and new business connection to work and have a higher ability to use information technology integration, financial management, risk management, value creation by CFO occupation universities and colleges for training¹³. To adapt to this, should be related to the course of information technology as soon as possible to open the XBRL application, database technology and application, network technology and application of high level universities accounting majors, strengthen students' ability to use information and technology integration and the use of large data analysis and risk control ability of enterprise financial management, guarantee the social adaptability of talents cultivation. Change to the "strategic financial decision makers" center of traditional accounting functions based on the trend, focusing on analysis and decision support, budget forecasting, internal control, risk management, cost analysis, quality of information content such as CMA, CIA

and CISA will become the standard of big data era of accounting personnel value knowledge system. Colleges and universities should actively encourage and train professional teachers of CMA, CIA, CISA learning and obtain a corresponding qualification certification, timely courses provide such certificate related learning, consultation and help for students, promote students learning motivation, professional cognition and occupation career planning, transportation shortage of talents for the society.

Take Advantage of Cloud Computing, Build Cloud Accounting Education Platform

Based on the SPI framework, cloud computing in the public cloud, private cloud, hybrid cloud three deployment mode for users in high performance computing, network finance, etc. three kinds of service payment mode that infrastructure as a service, platform as a service, SaaS. In the actual situation is to build a private cloud and most of the high cost of college accounting education funding shortage, colleges and universities can adopt hybrid cloud like enterprise accounting cloud, cloud computing will be applied to the field of accounting education. Although some software companies have developed accounting cloud learning platform, but most of the traditional accounting application is moved to the cloud platform, system independent of each other, is mainly aimed at the analysis of structured data calculation, the case cannot receive timely updates, and this paper said the use of cloud computing means to build the cloud education platform is essentially different. The construction of cloud accounting education platform is the inevitable trend of the development of university accounting education [14]. The accounting profession can buy online Xiang Yun computing providers of cloud computing services, infrastructure supported by the provider (server) for the development of accounting education in network applications, data analysis software required in the cloud lease, and on the basis of information security and Enterprise Cloud accounting system connected to realize real-time data sharing. According to the actual teaching needs, in the accounting education

platform can be established, including accounting data systems, accounting teaching system, cloud accounting simulation, operating systems, mobile terminal systems and other modules. The accounting data system, the data is derived from the teaching data generated from enterprise cloud accounting generated data can be shared, under the premise of ensuring the safety of the enterprise business secret, the actual enterprise data update to the database, through the data analysis software, will be structured and unstructured the data storage and analysis and processing. Accounting teaching system, the system can be divided into classroom teaching system, effect control system. In the accounting classroom teaching, the data in the data system can be called at any time. At the same time, the learning effect of the students can be understood in real time through the teaching effect control system. At the same time, the data produced in the accounting teaching system is stored in the accounting data system. Cloud accounting simulation operating system allows students to learn the actual operation of the cloud accounting system in the actual operation. This system can be used as a platform for the data stored in the data call teaching system generated data in the system, for the practical operation of the personnel training, so as to realize the comprehensive social accounting and demand of accounting post seamless. Mobile terminal system enables teachers, students and other mobile terminals, through mobile phones, IPAD and other mobile devices, according to the authority settings, ready to log on to the cloud accounting education platform for operation.

Change Teaching Methods

Financial professional teachers must adapt themselves to the new situation as soon as possible, and finish the "two study" as soon as possible line teaching transformation. We should combine the "financial" requirements and for courses and other online education platform in Colleges and universities, the financial professional teachers' teaching methods and contents of adjustment, such as the construction of digital campus, to provide a simulated

environment of simulation experiment teaching, the teaching and the financial industry professional on the ground, to help students to target industry financial awareness the study of accounting and industry; the uptake of Coursera, EDX and other online education, formed by teachers subject to the teachers to guide students' autonomous learning, the main changes in teaching methods; to speed up the construction of adaptive learning system and classroom recording feedback system, to strengthen students' awareness of autonomous learning, new trends in the new situation, data collection and analysis ability of habit look for ways of learning ability, independent innovation ability, independent thinking and guidance; the establishment of intelligent teaching management system, integration The curriculum design and operation, classroom teaching interaction, teaching content analysis, classroom teaching records, learning evaluation, teaching evaluation, exercises and answer interactive function, improve teaching efficiency and teaching effect; combined with the national entrepreneurship support policies and development situation of the financial management of large data, and relevant government agencies, policy platform, enterprise information docking, develop the college entrepreneurship oriented learning guidance mode and process based on; based on big data era from the sample to the overall, from the causal relation to change status of correlation analysis, the design of the era of big data statistics for economics and Management Majors the requirements and methods of learning course teaching.

RESULTS

Curriculum Design and Reorganization

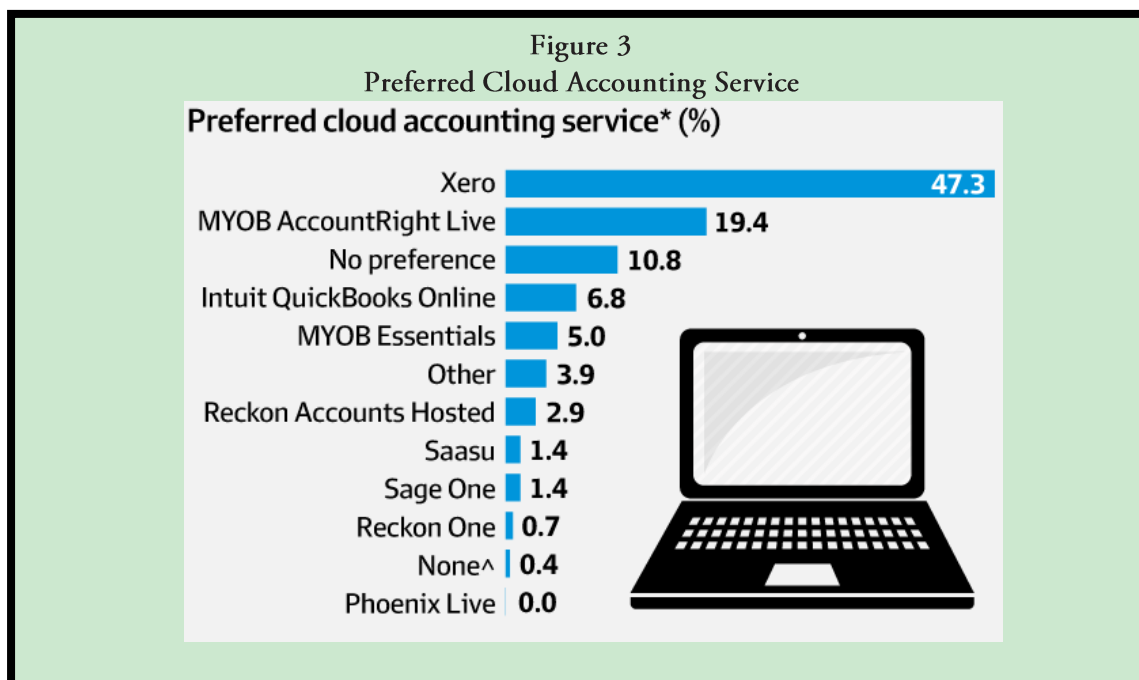
Because the cloud accounting education platform can make use of the data on the public cloud, through the accounting data system, we can understand the needs of the enterprise to the accounting position in time, so as to design the curriculum system and reorganization. In the curriculum, should be the next big data background of accounting post demand, in addition to the creation of general data retrieval

courses, practice courses should be added to the data analysis and processing software, especially software unstructured data mining technology course, cloud accounting simulation operating system course. In the course of time, should be of practical courses and theoretical courses interspersed with each other, which enables students to grasp the basic theory on the basis of practical operation, improve the ability of students, enhance data editing, processing and operation ability.

Building New Curriculum System

According to the era of big data, the ability of information thinking and data analysis of accounting students is higher. For colleges and universities from the following aspects to adjust and construct the curriculum system: to adapt to the new direction of professional training, the professional course selection, retention of basic theory courses and professional main theoretical courses, training and other related courses to eliminate manual bookkeeping. Adjust the

relevant experimental training courses of accounting information system, and improve the ERP system with the software provider, increase the business interface module and the financial information analysis module. around the data processing set of information technology related supporting courses on computer culture general operating system, commonly used software courses and basic courses, set the programming language, database, software development and other professional information management class curriculum, so that students need to have professional under the new situation data analysis and processing ability [15]. The accounting functions of the center of gravity to the “strategic financial decision makers” changes to the situation will be the main courses focus of management accounting, the creation of CMA, CIA, CISA forensics courses, depending on their teachers or teaching together with independent professional training institutions. Preferred cloud accounting service is shown in figure 3.



The big data situation of enterprises urgently need to build a unified information platform and the implementation of financial standardization, in the

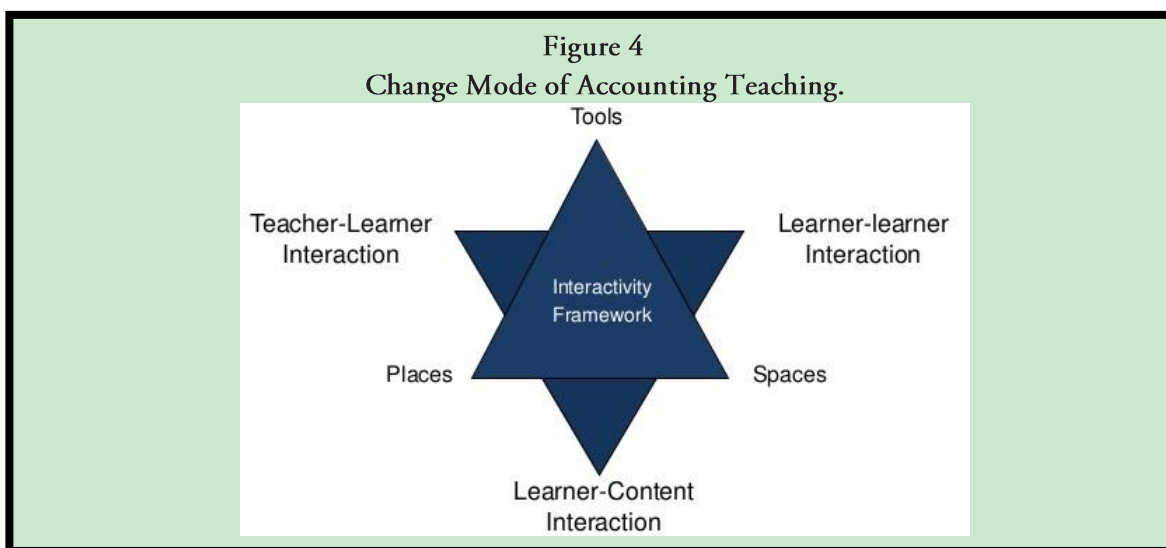
new financial data acquisition system and the financial data analysis system software development, joint research and development, R & D projects can be used as a practical

training course in the course of nature into the enterprise financial process, help to achieve the enterprise's financial position and quality requirements personnel training on seamless, while expanding students in financial software development, training channels of employment and entrepreneurship channels.

Teaching Mode Changing

In the teaching design, the teaching resources including video, text and other nonstructural data stored in the data in the accounting system, the introduction of enterprises and institutions to share data based on cloud accounting, real-time monitoring data collection, production of electronic materials, adjust at any time in the classroom teaching, which will be used in the

latest data and cases the theory of teaching, improve the students' interest in learning. Teaching organization, the use of cloud accounting education platform, on the one hand, can be targeted to arrange students in the network data mining effective resources of the operation, training students to find and screen the ability of data. On the other hand, based on the students master the basic theory, give full play to the initiative, through the project layout, let students volunteer team use accounting aspects of professional knowledge, post work, cultivate students' ability of communication and cooperation. Figure 4 shows the change of teaching mode.



Through the teaching monitoring system and the mobile terminal system of the cloud accounting education platform, the effect of each student's theoretical courses and practical courses is monitored in real time. By checking the students' homework and test results, the teacher can know the teaching effect at any time, and the students can also understand their own knowledge and knowledge through the teacher's comments and suggestions at any time, so as to improve the quality of teaching.

DISCUSSION

In the era of big data, the development of cloud accounting poses a challenge to the existing educational concepts, infrastructure, educational models, and teaching staff of accounting education in Colleges and universities. In order to meet the challenge, the university accounting education needs to use the cloud computing technology advantage to construct the cloud accounting education platform, change the accounting education model, and establish a high data literacy accounting professional teaching

team. Of course, how to ensure the safety of information, the implementation of cloud accounting education platform and enterprises and institutions of cloud accounting docking, to be further explored and studied. In view of the problems in the course teaching reform, through the teaching idea, the organization teacher study, the innovation teaching method and so on, this article carries on the systematic inspection to the transformation of the student education pattern under the big data environment. Big data has just started in China's colleges and universities for higher education in financial accounting, big data will face what kind of impact is unknown, but the acceptance and application of big data technology to improve have reached a certain consensus in the field of education, students' professional quality in Colleges and universities therefore, to seize the opportunity, meet the challenge, to finish the teaching the reform of financial accounting.

Human Subjects Approval Statement

This paper did not include human subjects.

Conflict of Interest Disclosure Statement

None declared.

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