

Discussion on the Reform of Accounting Major in Higher Vocational Colleges Under the Background of Big Data

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Abstract: With the rapid development of big data technology, the accounting industry and accounting major are faced with many opportunities and challenges. Under the background of big data, the traditional highly repetitive basic accounting work faces the risk of being eliminated, and the collection, processing, presentation and analysis of accounting data have undergone tremendous changes. The change brought by big data technology to the accounting industry requires that the accounting major in higher vocational colleges must quickly keep up with the pace of change, and carry out professional reform from talent training, teaching team, curriculum system and other aspects. This paper discusses the transformation of the accounting industry under the background of big data, the challenges faced by the accounting profession in the era of big data and the countermeasures, with a view to providing ideas for the transformation of the accounting profession in higher vocational colleges under the background of big data.

Keywords: Big Data; Artificial Intelligence; Vocational Education; Accounting

Introduction

In 2021, the Ministry of Industry and Information Technology issued the "Fourteenth Five-Year Plan" for the Development of Big Data Industry. On the basis of the definition and connotation of big data industry in the "Thirteenth Five-Year Plan", the "Plan" further emphasized the value of data elements, and clearly proposed that the training of big data talents is one of the important safeguards. In the plan, it is proposed to encourage vocational colleges and big data enterprises to deepen cooperation between schools and enterprises, build training bases, promote professional upgrading and adjustment, meet industrial needs, train high-quality technical and skilled personnel and other measures. At the same time, according to the JJC [2021] No. 2 document, "Comparison Table of New and Old Major of Higher Vocational Education of the Ministry of Education", the accounting major was officially renamed Big Data and Accounting, which also means that the accounting major is currently facing huge changes. According to the guidance of the document, the talent training objectives, curriculum system, suitable positions and other dimensions of big data and accounting majors have been adjusted in order to cultivate technical talents more in line with the current employment needs of enterprises. At the "IT driven industry financial reform" summit forum in 2021, a list of ten information technologies affecting Chinese accountants in 2021 was released. In this list, the top ten information technologies affecting Chinese accountants include: financial cloud, electronic invoice, accounting data analysis and processing technology, electronic accounting archives, robot process automation (RPA), ERP, mobile payment, data center Data mining and intelligent process automation (IPA). According to the analysis of Chen Hu, president of ZTE New Cloud Service Co., Ltd. and member of the Accounting Informatization Professional Committee of the Chinese Accounting Society, the top ten information technologies in this list can be roughly divided into two categories. On the one hand, it reflects the development and change trend of the financial industry in the past and present decade, and on the other hand, it is about the development direction of financial digitalization under the future enterprise digitalization. The influence of big data is reflected in many aspects, such as the top-level design of national development, the development route of vocational education and the future change trend of the industry. Therefore, in the

context of big data, the accounting profession in vocational education needs to keep up with the development trend and find innovative breakthroughs in many changes to meet the social demand for accounting talents.

1. Transformation of accounting data processing in the era of big data

1.1 Changes in the collection, cleaning, analysis and presentation of data information

Big data is characterized by complexity and efficiency, including structured, semi-structured and unstructured data. Unstructured data includes not only text, but also audio, video, photos, documents, social media, websites and other formats and forms. Most of the data in enterprises is unstructured data. The application of big data technology enables enterprises to collect, clean and analyze unstructured information. Therefore, the work content and work mode of enterprise finance and accounting personnel have changed. The integration of big data technology and accounting industry has transformed traditional accounting from accounting type to management type (Wang Xiaohong, 2021), and the work content has gradually changed from traditional accounting and supervision to analysis and prediction. Enterprise managers hope that financial personnel can effectively predict the occurrence trend of events through big data technology and professional knowledge. Thus, the management can change from after-remedy to pre-intervention, effectively control decision-making risks, and promote the development of enterprises.

In the era of big data, the presentation of data information has also undergone fundamental changes. Big data is characterized by Variety, that is, there are many different forms of big data information, and visualization is an important manifestation of its diversity (Xu Jingchang, 2019). Big data visualization technology effectively improves the understandability of data, especially for highly professional financial data, traditional financial information, such as financial reports and financial statements, has a certain threshold of understanding, and has certain professional requirements for accounting information users. However, under the big data visualization technology, obscure professional information will greatly enhance the comprehensibility of information through the visualization technology. It provides more understandable and intuitive financial information for internal and external accounting information users.

1.2 Data and information growth and processing speed greatly improved

Another feature of big data is Velocity, which is mainly manifested in two aspects: on the one hand, the growth rate of data information is fast; on the other hand, the processing speed of data information is fast (Xu Jingchang, 2019). In the quality requirements of accounting information, it is required that accounting information should be timely, but in the traditional accounting system, timeliness is more reflected in providing regular financial reports or financial data on time. In the integration of big data and accounting industry, big data technology makes it possible to provide real-time information. The rapidity of big data will inevitably change people's perception of timeliness. This will solve the current problem that the periodic financial report can not reflect the real time financial situation of the enterprise. Real-time information will provide strong support for corporate management decision-making, business operations and investment and financing decisions. At the same time, real-time information transmission and processing under big data technology also plays a certain role in ensuring the authenticity of accounting information and avoiding moral hazard.

1.3 Non-accounting information will play an important role in the field of finance and accounting

In the current field of financial accounting, accountants usually need to provide accounting information under the premise of accounting assumptions and in accordance with the requirements of accounting standards. In accounting assumptions, the monetary measurement assumption requires that accounting information should be measured in currency. In other words, if an element or information cannot be accurately measured in currency, it cannot be reflected in accounting information, nor can it be reflected in financial reports and accounting statements. In traditional accounting, the choice of monetary measurement as a unified measurement measure can comprehensively reflect the production and operation of

enterprises, and make the accounting information among different enterprises comparable. However, with the continuous development and updating of economy and technology, the limitations of accounting information under the monetary measurement assumption are increasingly obvious. In the actual operation of enterprises, many resources that cannot be measured in currency are excluded from the accounting statements, such as human resources, market resources, data resources, company reputation, supply system resources, etc. But in fact, many resources that cannot be measured by money have a crucial impact on the production and operation of the company. These resource information are of high value to the company's shareholders, potential investors and other stakeholders. With the support of big data technology, resources that are difficult to measure can be set relevant indicators and used data-mining algorithms to search for specific types of trends or patterns by analyzing the provided resource data. In this way, models can be generated and the resource data can be processed and analyzed. Through big data technology, some non-accounting information of enterprises that cannot be measured and disclosed under the current accounting standards can be effectively transmitted to shareholders, potential investors and stakeholders, as an effective supplement to accounting information, which has an important impact on their decision-making.

2. Challenges faced by accounting majors in higher vocational colleges under the background of big data

2.1 It challenges the training of accounting students

In the context of the rapid development of big data technology, the accounting industry has changed greatly. Therefore, the requirements of enterprises for financial talents have changed greatly. Simple traditional accounting can no longer meet the requirements of enterprises for financial work. For higher vocational colleges, student training should be consistent with the employment demand side, and meet the needs of enterprises to train students. Higher vocational colleges need to change the traditional teaching concept of accounting specialty, actively cooperate with industry enterprises in teaching, innovate collaborative education methods, and reconstruct the curriculum system. Thus, traditional accounting courses and big data courses are organically integrated into the talent training system. Meanwhile, the focus of teaching should also be changed from accounting to management and analysis, and students should be trained to have the basic ability of management talents based on accounting ability. In addition, accounting majors need to add big data thinking courses and tool courses in teaching content, and add accounting information processing, data analysis, financial robot application (RPA) and other courses. Actively cooperate with enterprises and encourage students to obtain 1+X certificates such as digital management accounting and corporate financial robots.

2.2 It challenges the ability of accounting teachers

In the process of innovation in the accounting industry, enterprises need "big data+accounting+management" compound talents, and the single accounting has been gradually replaced by AI financial robots. For most accounting teachers in higher vocational colleges, although they have excellent professional knowledge and skills in financial accounting, their concepts and abilities in new technologies such as big data technology, artificial intelligence application, information technology application and visualization application cannot support the professional development and meet the further development of the major in the era of big data. Accounting teaching in the era of big data requires teachers of accounting major to constantly improve their professional level and scope of knowledge, and strive to adapt to the development trend of accounting major under big data. Through these studies, teachers can provide students with the integration of big data and accounting major.

2.3 It challenges the teaching of accounting specialty

Due to the changes in the talent training system of accounting major, the corresponding curriculum system, teaching mode, teaching method, course resources, students' learning habits and training conditions need to make corresponding adjustments and changes. In the traditional curriculum system of accounting major in higher vocational colleges, most of

them focus on financial accounting, and most of the professional courses are accounting and accounting system, which is insufficient for management accounting, big data courses, enterprise financial robots and other courses.

In terms of teaching mode, on the one hand, although the mixed teaching concept has been popularized, there are still superficial problems in the practice process, and it has not really achieved the expected effect. On the other hand, the school-enterprise cooperation in teaching cooperation is not deep enough, and there are still differences between teaching and practical application in enterprises. In terms of teaching methods, most courses are still traditional classroom teaching methods, which do not combine "online and offline". In terms of course resources, some course resources are not updated in time and no corresponding resources are provided for the latest trends of the industry.

In terms of students' learning habits, some students in higher vocational colleges are lack of learning initiative and self-consciousness, and it is difficult to maintain good learning habits, and most students have weak basic knowledge of big data, even no good computer foundation, so higher requirements are put forward for teaching. In terms of training conditions, due to the characteristics of the accounting profession, the financial work of the enterprise has confidentiality and the particularity of economic responsibility, so most of the students' training is conducted in the training room using simulation software, which lacks a real working environment and accounting business. In addition, the accounting standards and tax laws of the accounting industry are constantly updated, and the software is not updated in time, so it is difficult to really simulate the actual work of the enterprise. At the same time, the training software of most vocational colleges currently does not have big data modules and cannot complete the business exercises related to big data. Students can only stay in the theoretical stage of learning big data.

3. Countermeasures for accounting majors in higher vocational colleges under the background of big data

3.1 Innovate the training mode of accounting major in higher vocational colleges

For higher vocational colleges, talent training needs to follow the industry development trend and enterprise demand, and make innovation and reform under the original talent training mode combined with big data background: First of all, use the accounting post category to position professional goals and directions, and integrate "data thinking" into training objectives. In the traditional accounting major, the professional training objectives are mainly focused on accounting, auditing, economics, management and other aspects. However, under the current big data background, the requirements of enterprises for accounting positions have changed, which requires higher vocational colleges to reposition the professional goals and directions according to the latest positions, and integrate big data thinking into talent training objectives for new financial related positions such as financial sharing service center, financial big data center and risk control department, so as to cultivate financial talents in the new era that meet the industry development and enterprise needs. Secondly, according to the new requirements of the post, the core curriculum system should be reconstructed, and new technologies and new formats such as "data thinking course" and "data tool course" should be introduced into teaching. While adjusting the talent training objectives, higher vocational colleges also need to upgrade and reconstruct the core curriculum system, design the curriculum system according to the trend of intelligence, data and technology of employment posts, and set up big data thinking course, big data tool course, big data fusion course and other courses. Integrate technologies and methods such as big data application, big data platform, artificial intelligence, machine learning, blockchain and data visualization into the curriculum system. So as to cultivate financial and accounting talents who can be competent in the new economy, new business forms, new technology and new era.

3.2 Build a compound knowledge system teaching team under the background of big data

Under the background of big data, the teaching team and teachers of accounting need to be further improved. They

should not only be familiar with the professional knowledge of financial accounting, but also have the knowledge and skills related to financial big data. On the one hand, organize teaching teams to participate in all kinds of big data technology-related training to improve teachers' informatization level and big data application ability. On the other hand, higher vocational colleges need to actively promote the integration of production and education, deepen the cooperation between schools and enterprises, and build a teaching team with a complex knowledge system through various ways, such as teachers entering enterprise practice, introducing enterprise industry experts as part-time teachers to supplement teacher resources, and establishing industrial colleges. Let the role of "teacher" in higher vocational colleges not only be a full-time teacher in the school, but also integrate multiple identities such as industry experts, business specialists, technicians, etc., further enrich the faculty of accounting, and provide students with dual training of professional knowledge+big data technology.

3.3 Refine accounting teaching process based on big data technology

In view of the problem that the teaching process of higher vocational colleges is not detailed enough, the teaching process of accounting major can be further refined based on big data technology and big data platform: In the teaching process, use digital means to upgrade the teaching level, highlight practical teaching, and connect 1+X professional skills. In daily teaching, relying on the online platform, integrate all kinds of resources, cultivate compound teaching team, and build a blended teaching system. The daily teaching level should be improved from the aspects of enriching and perfecting teaching resources, promoting the organic combination of "online and offline" teaching and developing multi-level and multi-dimensional evaluation system. In terms of practical teaching, due to the special confidentiality of the accounting industry, most practical teaching needs the support of simulation training room. For the addition of big data courses, higher vocational colleges need to combine big data platform to constantly upgrade and improve the original practical training equipment, so as to provide students with a more advanced, more comprehensive and real practical training teaching environment. At the same time, the "1+X" skill certificate is integrated into the curriculum system and combined with practical training courses to promote the "1+X" modular teaching model. It provides practical training opportunities for students in intelligent finance and taxation, digital management accounting, corporate finance and accounting robot application and financial sharing services.

Conclusion

Promoting the reform of accounting major in higher vocational colleges under the background of big data is a comprehensive project involving many levels and integrating big data, artificial intelligence technology and accounting professional theoretical knowledge. To adapt to the changes in the era of big data, accounting major is not simply to add or subtract a few courses. It requires accounting major in higher vocational colleges to integrate new technologies and new ideas from various aspects such as talent training, curriculum system and teaching team. Thus, the school can cultivate complex financial and technical talents that meet the needs of the industry and enterprises, strive to improve the comprehensive employment level of accounting students in higher vocational colleges, and cultivate qualified high-quality accounting talents to serve the local economic development and the development of the "Fourteenth Five-Year Plan" big data industry.

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