

Research on the Construction of Course Groups in the Intelligent Direction of Accounting Major

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Abstract

In recent years, with the advancement of science and technology and the wide application of artificial intelligence, significant changes have taken place in the means and methods of accounting work. There are still many areas for improvement in the setting of accounting courses in colleges and universities. For the cultivation of accounting professionals, it is necessary to meet society's new needs and expectations for such talents. Group construction combines discipline construction and talent training programs reasonably, and colleges and universities must build accounting professional course groups.

Keywords

Artificial Intelligence; Higher Vocational Education; Accounting.

1. Introduction

The accounting industry has undergone tremendous changes with the advent of big data, artificial intelligence, the Internet, and cloud computing (referred to as "Dazhiyiyun"). Since May 2017, the four major international accounting firms have successively listed financial robots and their solutions. On October 15, 2017, Kingdee released a cloud-based financial robot that uses cloud computing, big data, image speech recognition, LBS, and other artificial intelligence technologies to provide enterprises with multi-scenario and all-around intelligent financial services. The artificial intelligence system represented by the financial robot has been able to replace the time-consuming, standardized process. Highly repetitive manual operations in the financial processing process complete the collection, processing, and summary of statistical analysis of a large amount of data and can also identify problems in the financial process rule loopholes. Automatic optimization of shared accounting processes has also evolved from a concept to a reality. Artificial intelligence has liberated financial personnel from highly repetitive and low-complexity work and brought unprecedented development opportunities for the country's accounting industry.

In November 2021, the Ministry of Finance's "Outline of the 14th Five-Year Plan for Accounting Reform and Development" proposed: Relying on digital information technology and promoting the digital transformation of accounting and auditing work as the starting point, the expansion and upgrading of accounting functions should be realized, and from environmental, technical, and institutional aspects, philosophical accounting issues have been planned. The direction of integrated with technological development. Therefore, in the era of "Great Wisdom Moves the Cloud," it is necessary to reform and innovate the training mode of accounting talents in higher vocational education to cultivate accounting talents suitable for social needs.

2. Literature Review

2.1. Concept Definition and Concept Research of Intelligent Course Group

Chen et al. (2021) proposed that the accounting intelligence course group refers to a combination of independent courses that have a division of labor, are interrelated, and closely

cooperate. They systematically introduce certain types of knowledge and are professional and holistic., orderliness, hierarchy, and openness. Zhou et al. (2019) proposed that the transformation of accounting majors in the intelligence era should comprehensively reconstruct the talent training objectives and knowledge structure and reform the education system, teaching system, teaching staff, and school-enterprise integration. Wang et al. (2021) believe that constructing an intelligent accounting major is the primary and institutional work of the reform of intelligent accounting education. Zhang (2021) summarized the concepts proposed by various scholars into the concept of technology application, system model, application field, management activities, and interdisciplinary views and believed that innovative finance is continuously developed in the process of digital financial transformation and intelligent application. The new generation of accounting, using artificial intelligence and other high-tech as the infrastructure and core elements, realizes the comprehensive integration of artificial intelligence and finance. Accounting scholars generally position the cultivation of intelligent accounting talents as "the application of intelligent technology in accounting scenarios."

2.2. Content and Structure of Intelligent Course Group

Wen (2020) proposed that intelligent accounting courses include the following contents:

1. Computer introductory courses include computer foundation, database principles, applications, and programming languages.
2. Professional introductory courses include intelligent accounting introduction, undergraduate Fundamentals of data analysis, advanced data analysis and visualization, machine learning, and data mining.
3. Professional courses include intelligent financial sharing, business intelligence analysis, financial decision-making based on big data, and extensive data auditing.

Chen et al. (2021) constructed courses including:

1. Basic computer application
2. Financial activities and related courses generated through computer automation
3. Accounting information processing, processing, and transmission system application courses
4. Accounting-related applications Technical courses
5. Decision support technical courses
6. Information technology courses that may potentially affect accounting work, six aspects of intelligent accounting courses.

2.3. Current Status of Research in Western Countries

Internationally, the Association to Advance Collegiate Schools of Business (AACSB) updated the accounting accreditation standards as early as 2013 and 2018, requiring all accounting departments that have received additional accreditation to be based on technology and data analysis skills integrated into the curriculum system. The critical content of standard A7 in 2013 includes data creation, sharing, reporting, analysis, and mining. Quite a few foreign universities have set up majors integrating accounting and big data technology, for example, "Accounting with Data and Analytics" at the University of Southern California in the United States and "Accounting with Data and Analytics" at the University of Portsmouth in the United Kingdom. "Accounting with Data and Analytics," "Accounting with Data and Analytics" of St. Mary's University in Canada.

It has become a consensus in academia and industry to cultivate compound accounting talents with intelligent technology (Qin,2015). However, the contradiction between supply and demand is very prominent. Higher vocational colleges are still determining which courses to offer to cultivate intelligent accounting talents and how to arrange and enrich the course content. So far, since there are no graduates in the direction of accounting intelligence, the

quality of training, social recognition, and employment risks have yet to be tested by social practice. Therefore, it is urgent to research the construction of higher vocational accounting intelligence courses. Promote the healthy development of the accounting profession in higher vocational education (Xiong, 2019).

3. Opportunities and Challenges of Accounting Talents Training

Accountants must adapt to the new requirements of high-quality economic development, significant risk prevention and control, the modernization of the national governance system, and governance capabilities. Moreover, accountants face the challenges of big data, cloud computing, mobile Internet, the Internet of Things, artificial intelligence, and blockchain. The new opportunities and new challenges brought about by representative technological innovation.

3.1. New Opportunities for Accounting Talent Demand

The technological elements of big data and artificial intelligence have intensely promoted the quality and efficiency of accounting work. The improved efficiency of accounting information processing has made much tedious work in accounting positions more accessible and more efficient, such as the system automatically generating financial statements, counting sales data, identifying the authenticity of invoices, and completing reimbursement. Accounting work is more standardized, which can reduce strategic decision-making errors, implementation errors, and errors of favoritism and fraud and improve management accounting capabilities and financial accounting quality (Zhang, 2015).

Strategic decision-making and executive control under the "digital intelligence economy" are more complex, difficult to estimate, comprehensive, and difficult to replace by machines. Accountants should not stop at traditional accounting but should become modern management compound accounting talents who pay more attention to pre-budget, in-process control, post-event analysis, and application of assessment and evaluation. Professor Wang Huacheng believes that financial positions in the era of "digital intelligence" should include "smart financial accountants, smart financial engineers, smart financial operators, smart financial planners, smart financial analysts for financial companies, smart auditors," and so on.

3.2. New Challenges in the Supply of Accounting Education

According to the factor structure theory of the country's economic supply-side reform and the latest policy requirements of incorporating data resources into the factor structure, the supply of traditional accounting education faces imbalances in the six major factors of capital investment, human capital, interdisciplinary resources, teaching systems, technology, and data challenge. First, the current middle-aged and elderly accounting teachers have rich teaching experience but lack computer knowledge. Most young teachers go directly to the post of university teachers after graduating from colleges and universities. Secondly, the key to cultivating interdisciplinary talents in the era of "digital intelligence" lies in the integration of business, finance, and technology. However, integrating accounting with macroeconomics, social sciences, science, and engineering could be much better (Zhang, 2020). Even accounting textbooks still need to be based on traditional Business processes and processing methods that do not combine the requirements of new formats and the application of new technologies. Again, the design of the teaching curriculum system is unreasonable. Generally speaking, the proportion of professional courses and introductory courses needs to be balanced, and there need to be more information technology and comprehensive quality training courses in detail. The integration of interdisciplinary courses also needs to be strengthened. Knowledge, digital information technology, and strategic management knowledge are isolated. Regarding professional courses, the proportion of financial accounting courses is still relatively large, the

cost control, risk management, and strategic decision-making class hours are relatively small, and the course system needs to be more closely connected. Finally, the current "cramming" teaching is still common, and the teaching form is relatively single, which makes it difficult to mobilize students' enthusiasm for learning.

4. Reform of Accounting Education

The difference in the supply of accounting education in colleges and universities is a fundamental reason for the significant difference in students' comprehensive quality. This paper presents reform proposals for the imbalance problem from the following four aspects.

4.1. In-depth Promotion of School-Enterprise Cooperation and Innovation

Universities should cooperate with other universities, scientific research institutes, and enterprises with R&D and innovation capabilities. Moreover, universities need solid technical capital in terms of educational capital investment, focusing on digital and intelligent accounting practical skills for strategic, intelligent decision-making, and automatic cost control—project cooperation. Schools and enterprises jointly funded and set up training plans from the perspective of talent demand and supply, including curriculum plans, faculty, classroom teaching, practical training, and ability assessment.

4.2. Strengthen the Construction and Innovation of the Teaching Staff

The supply of accounting education is mainly to continuously optimize the elements of human capital in education, that is, to strengthen the construction of teaching staff. On the one hand, colleges and universities should pay attention to talent recruitment and optimize the structure of teachers. Colleges and universities should formulate reasonable recruitment plans and do an excellent job in reviewing and allocating human capital increments, such as introducing high-level teachers with educational backgrounds in emerging technologies in the digital economy era from outside. At the same time, colleges and universities also need to introduce or recruit some financial experts with rich financial experience, familiarity with the accounting operating system, and high professional level from enterprises as part-time teachers to strengthen the construction of accounting practice teaching staff to integrate human capital and optimize teaching staff. On the other hand, it is necessary to enhance business capabilities by strengthening training and development. Training for the existing human capital stock is a meaningful way to cultivate a compound teacher team, highlighting learning new knowledge and skills.

4.3. Reconstruction of Accounting Curriculum System Innovation

The reconstruction of the accounting course system needs to add courses related to AI to cultivate students' digital thinking and use powerful data analysis tools. Data visualization analysis tools enrich the practical teaching links while reducing accounting class hours and gradually cultivating business awareness. At the same time, professional restructuring needs to strengthen the construction of supporting teaching materials. The content of teaching materials should be based on economic characteristics and market conditions, timely compile available teaching materials suitable for innovative management talents, and broaden the breadth and breadth of course content settings.

4.4. Strengthen the Innovation of Intelligent Education Platform

In the era of "digital intelligence," data resources, as an essential means of production, have also become a necessary foundation for accounting education platforms in colleges and universities. Universities should build a "digital intelligence" education platform based on data elements according to changes in the market environment and social needs. The intelligent education

platform should focus on new positions represented by intelligent financial analysis, intelligent financial audit, business finance, and strategic finance.

5. Conclusion

The new factor market structure has brought about significant changes in the supply of accounting talents, which has stimulated a considerable impetus for accounting education reform. Recently, the speed of knowledge updating is constantly accelerating, so teachers must be able to update their knowledge reserves constantly. Practical ability, realize the dual ability of theory and practice. On the one hand, universities can adopt the method of introduction to attract talents from outside and introduce key personnel with rich practical experience, thus shortening the relationship between students and enterprises.

On the other hand, it promotes the way of going out, encourages young teachers to learn and exercise in other enterprises, increases their hands-on ability in practice, and obtains various professional skills certificates related to their majors. In addition, the school has also introduced interim measures for identifying and managing "dual-energy" teachers and relevant assessment standards for regular assessment to stimulate teachers to improve their enthusiasm continuously. In this way, not only is students' ability improved but the quality of daily teaching can also be improved.

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References

- [1] S.L. Zhou, D.P. Zhou: The Transformation and Development of Accounting Education in the Age of Intelligence, *Accounting Research*, 12(2019):92-94.
- [2] A.G. Wang: Research on the Reform of Accounting Major in Higher Vocational Education under the perspective of Internet + Artificial Intelligence, *Commercial Accounting*, 10(2021):4-8.
- [3] Q.L. Zhang: Review of Smart Finance Research, *Commercial Accounting*, 03(2021):9-16.
- [4] S.B. Weng.: Research Hotspots and Future Research Prospects of Management Accounting--Comparison of Research at Home and Abroad in the Past 20 Years, *Management Accounting Studies*,1(2020):9.
- [5] S.Y. Chen, C.L. Chen, M.H. Chen: Research on the Construction of Accounting Intelligent Course Group---Taking Guangzhou Huashang College as an Example, *Friends of Accounting*, 21 (2021): 134-138.
- [6] R.S. Qin: The Development Trend of Accounting Industry in the "Internet +" Era, *The Chinese Certified Public Accountant*,12(2015): 20-24.
- [7] S.Y. Chen, C.L. Zheng, M.H. Chen: Research on the Construction of Course Groups for Accounting Intelligence, *Friends of Accounting*,21(2021):134-138.
- [8] X. Zhang: Redesign of Higher Vocational Accounting Course System in the Era of Artificial Intelligence, *Journal of Tianjin Vocational Institutes*, vol 22 (2020):49-52.
- [9] X.Z.Zhang: Accounting Objective and Reporting System Construction of Managerial Accounting in China, *Finance and Accounting Monthly*,11(2015):3-8.
- [10] W.Y. Xiong: Change of Accounting Industry and Reform Strategy of Accounting Teaching in Higher Vocational Education in Artificial Intelligence Era, *Journal of Huanggang Polytechnic*, 21 (2019):68-71.