



Research on the Integration of Block-chain Technology into Accounting Curriculum Development within the Context of New Business Digital Transformation

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Abstract. With the rapid advancement of technology, the modern world has been transformed by big data, block-chain, artificial intelligence, cloud computing, 5G, and the Internet of Things. The emergence of these cutting-edge technologies has greatly propelled the structural adjustment of the economy, society, and universities, and has also brought about a reshuffling of knowledge, changing the way we acquire, disseminate, and teach. As the era progresses, Chinese universities must accelerate reform, promote a leap in quality, and advance development that is digital, networked, collaborative, and problem-oriented, with the integration of core socialist values. The "new business" aims to reconstruct traditional business courses by integrating the latest technologies to meet the new requirements of today's technological, social, and economic development. Guided by theories and methods with Chinese characteristics, it seeks to build an entirely new model that integrates industry and education to meet the diverse needs of students. With the continuous development of big data and artificial intelligence, they have become important means of solving economic and management problems. However, a major challenge at present is that many universities still apply these new technologies in a simple and superficial way to traditional business education. This necessitates measures to achieve digital empowerment, thereby enhancing the quality and efficiency of business education.

Keywords: block-chain, Digital Transformation, new business

1 Introduction

To implement the national strategic decisions such as the "14th Five-Year Plan," the "Long-Range Objectives Through the Year 2035," the "Internet Plus" initiative, and the "Belt and Road" initiative, and to serve local economic construction and promote the digital industry, there is an urgent need in society to cultivate new business talents. These talents are essential for enhancing the level of technological innovation in enterprises and promoting their digital development. At the same time, the new technological revolution and the application and promotion of new technologies such as the Internet of Things, block-chain, new-generation artificial intelligence, big data

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analysis, and virtual reality also urgently demand the cultivation of new business talents.

In the context of the digital economy era, new business models require the integration of "cross-disciplinary," "innovative," and "composite" talents who understand the application of digital technology and new business expertise. For instance, the evolution of accounting, from double-entry bookkeeping to the formation and development of cost accounting, and the transformation to management accounting, has been driven by new technologies. Influenced by technological changes, accounting processing techniques have also continuously evolved, from manual bookkeeping to computerized accounting, accounting informatization, and financial cloud services, all of which are inseparable from technological development^[1-2]. The ongoing integration of accounting with block-chain technology will inevitably have a significant impact on the curriculum system and core course reforms in accounting majors at institutions of higher education.

2 New Issues in the Cultivation of New Business Talents

Currently, as we enter a new era of digital transformation, the way work is conducted, organizations are structured, and even business models function have undergone comprehensive changes driven by digital technology, especially involving changes in digital business application models and the resulting reconfiguration of employment. block-chain technology, as a cutting-edge internet technology, is increasingly influencing various industries, particularly with its extensive application in the field of finance and accounting, which poses new requirements for the reform of university accounting curricula^[3-5]. In the era of digital transformation, the traditional business talent cultivation model is no longer suitable for the development of new business models, increasingly revealing prominent issues such as disconnection from new demands, talent supply and demand contradictions, detachment from new business model applications, and a lack of core qualities and abilities for innovation and entrepreneurship in new business disciplines.

This article will start from the perspective of constructivist learning theory to explore the specific application strategies of block-chain technology in accounting major courses. Based on the design basis and course objectives of "block-chain+ Accounting," it aims to construct a professional course experimental teaching platform for "block-chain+ Accounting," a theoretical teaching content design, and an integrated course framework for achieving innovation and entrepreneurship capabilities through practical and creative teaching methods.

3 Impact Analysis of Digital Transformation on Accounting Talent Cultivation

3.1 Demand for Interdisciplinary Talents

Starting from the current talent demand, this section discusses the characteristics of the demand for accounting undergraduate talents, aiming to strengthen the connection between training objectives and the industry and profession, achieve a balance between supply and demand of accounting undergraduate talents, and thereby provide some references for the construction of talent cultivation goals for accounting undergraduates under digital transformation. The study will investigate the actual demand, summarize from aspects such as professional knowledge, professional ethics, teamwork ability, and computer application level, explore the requirements for interdisciplinary talents under the background of digital transformation, and the requirements for talent cultivation models and curriculum system construction under block-chain technology.

3.2 Analysis from the Perspective of Cultivation Objective Elements

Based on the "Double First-Class" construction list and the fourth round of accounting discipline assessment information from the Ministry of Education, this section selects 15 universities that offer accounting majors to explore and analyze the undergraduate accounting talent cultivation objectives and overall trends among these universities, and to compare the similarities and differences in the cultivation objectives^[6-7]. The analysis will cover objective cultivation elements such as professional knowledge, innovation ability, application ability, localization, international perspective, knowledge breadth, quality and literacy, management ability, foreign language level, professional ethics, and intelligence^[8-9]. Against the backdrop of digital transformation, this section will analyze the societal demand for digital talents and summarize the exploration of cultivation objectives. It will discuss how accounting majors are required to adapt to the new business characteristics of the block-chain and big data era, such as massive data processing, real-time cloud computing, and intelligent decision-making in accounting. Additionally, it will explore how universities' cultivation objectives emphasize that accounting graduates should adapt to the financial shared service model under the "Internet Plus" environment, and possess the thinking ability to use big data and artificial intelligence to analyze and solve accounting problems.

3.3 Analysis of the Empowerment of Collaborative Education Models

Our university, in order to strengthen new business education, actively collaborates with digital enterprises to jointly cultivate application-oriented talents in "block-chain+ Accounting" and serves the talent needs for the digital transformation and development of enterprises. As a thriving emerging industry, the market demand for block-chain+ Finance is continuously increasing. However, the current cultivation of block-chain+ Finance talents in vocational colleges is still in its infancy, and the

quantity and quality of cultivation are far from meeting market demands. It is necessary to build a coordinated development pattern of education and industry, strengthen the important role of enterprises, promote the reform of talent cultivation integrated with industry-education, and facilitate the two-way between industry-education supply and demand^[10]. The university explores collaborative innovation models with digital enterprises, such as jointly formulating talent cultivation plans, conducting teaching activities, providing professional practice platforms, and offering financial support for professional construction. This article will focus on discussing how to promote the co-construction and upgrading of industry colleges, support the cultivation of applied and interdisciplinary talents, highlight the "dual-subject" function of the university and enterprise collaborative education, and adopt the cooperation model of university-enterprise economic community and mixed-ownership system to jointly build a modern industry college.

4 Research on the Integration and Construction of Block-chain Technology in Accounting Professional Courses

4.1 Block-chain+ Teaching

Teaching is the core and foundation of talent cultivation, and it is the driving force for the connotation development of majors. Applying the "decentralized" characteristic of "block-chain" to the teaching process will greatly enhance students' autonomous learning abilities, improve classroom efficiency, and enable students to acquire knowledge through action.

(1) Practicalization of Teaching Content

When designing the teaching process, it is necessary to avoid comprehensive pure theoretical teaching methods as much as possible. Simplify or discard abstruse financial concepts, principles of finance, and complex mathematical formula derivation processes, and appropriately increase the content of case teaching.

(2) Decentralization of Teaching Process

Increase the interaction between teachers and students during the teaching process, motivate students to actively participate in teaching, and conduct brainstorming to make the classroom atmosphere more active and distinctive. In addition, achieve "empowerment" or "delegation" of students by teachers during the teaching process, allowing students to discover and solve problems on their own. This makes the curriculum system flat and hierarchical, highlighting the occupational orientation of professional courses.

(3) Stratification of Teaching Objects

Using grades to test teaching effects is a conventional teaching method adopted by college teachers. However, facing the specific fact that college students are becoming more and more diverse in personality and differentiated in employment goals, teachers should pay attention to the subdivision of teaching objects when designing curriculum reform plans, and achieve teaching students according to their aptitude.

4.2 Block-chain+ Assessment

Assessment serves both as a standard and a means. As a standard, it can test the effectiveness of students' learning and teachers' instruction, and also provides a basis for academic and capability certification. As a means, the assessment system has a strong guiding power; the setting of assessment indicators can motivate students to achieve their learning objectives. By leveraging the principles of block-chain technology, such as "decentralization," "time stamping," and "immutability," a multi-party assessment system can be introduced where various stakeholders provide more objective and fair evaluations of each student at different stages and points in time, achieving a "network consensus."

4.3 Block-chain+ Innovation

For accounting majors studying on campus, the most important aspect is to connect with society, keep up with the development trends of their profession, and integrate new business forms and capture new demands, in order to develop new business models or technologies. Therefore, in this process, the "social" characteristic of block-chain technology is of great significance for the innovation and entrepreneurship of students. Guide students to utilize the entrepreneurial prototypes and resources in the school's entrepreneurial space, encourage graduates to replicate, upgrade, and spin off to form real and mature economic entities, and then give back to the school by providing more practical job positions and offering more financial and human resource support for the cultivation of entrepreneurial prototypes among current students.

5 Conclusion

This paper will take the relationship between digital transformation and vocational education reform, as well as the academic combing and theoretical support for the cultivation of new business talents, as the logical starting point. It will deeply analyze the opportunities and challenges that the digital transformation era brings to traditional business education, as well as the problems faced by the cultivation of traditional business talents. Based on this, the paper will focus on proposing new business talent cultivation goals and requirements that meet the demands of the digital transformation era, and accurately position the key directions for the cultivation of new business vocational education talent in the digital transformation era. Ultimately, the paper aims to propose models and pathways for cultivating new business talents suitable for the digital age, intending to provide strong theoretical support and practical reference for the cultivation of new business vocational education talent in the digital era.

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