

Digital Transformation Path of Higher Vocational Finance Specialty based on Chain Fusion Theory

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Abstract

Digital economy, through the integration of real economy, has profoundly changed the way and scene of enterprise operation, and put forward new demands for financial and economic personnel training. The innovation of enterprise operation scenarios and modes needs the support of intelligent financial services, so it needs compound financial talents with big data and other technical capabilities. Based on the chain fusion theory, this paper establishes the "six-chain fusion" model of digital transformation of finance and economics majors in higher vocational colleges, deeply studies the interaction mechanism of 'six-chain' and explores the path of digital transformation of finance and economics majors in higher vocational colleges.

Keywords

Chain Fusion; Major in Finance and Economics; Digital Transformation.

1. Introduction

In 2018, Zhejiang Provincial Party Committee and provincial government identified digital economy as the "No. 1 project" and took the development of digital economy as the main line of future work. In August 2020, the "Notice on The Revision (Preparation) of Vocational Education Major Catalogue" for the first time put forward the "digital transformation" in the field of vocational education and made it clear that the major should meet the new demand for technical skills training in new forms of business, new models, new technologies, new occupations and other construction goals. In March 2021, the Ministry of Education issued the Professional Directory of Vocational Education (2021) to build a modern professional directory system of vocational education in response to the new economy, new technologies, new forms of business and new occupations, and improve the adaptability of vocational education. According to the information Technology New engineering Industry-University-Research Alliance data statistics, China's cloud computing, big data talent gap in the next five years 1.5 million. At the same time, in the context of digital economy, small, medium, and micro enterprises are facing the pressure of digital transformation. Since micro, small and medium-sized enterprises generally have problems such as weak information foundation, low financial management level, high-cost management pressure and financing difficulties, they especially need the support of smart financial services in the process of digital transformation. It can be seen that the industrial digital upgrade has spawned new demands for digital talents, and it is necessary to train "digital" and "intelligent" talents through the professional digital transformation of higher vocational colleges, so as to meet the needs of the development of digital economy. Although some higher vocational colleges have explored the problem of digital talent training for finance and economics majors, the teaching method of integrating professional courses and computer characteristic courses is basically adopted, which has little effect due to the limitation of class hours, teachers, and hardware equipment.

2. Review of Chain Fusion Theory

The chain integration theory refers to that in the process of industrial technological innovation, the advantages and characteristics of industrial chain, innovation chain and other chains should be given full play to break through the connection barriers between chains, strengthen the integration degree of each chain, realize the information interaction and value transfer of each chain, and ultimately improve the synergy level and realize the improvement of industrial efficiency [1]. In 2017, Several Opinions of The General Office of the State Council on Deepening the Integration of Industry and Education proposed that deepening the integration of industry and education and promoting the organic connection of education chain, talent chain, industrial chain and innovation chain (hereinafter referred to as the 'four chains') have become an important measure to solve the 'two sides' problem of professional talent cultivation on the supply side and the industrial demand side. In July 2019, the National Development and Reform Commission, the Ministry of Education and other six departments issued the National Pilot Implementation Plan for The Integration of Industry and Education, which once again emphasized the organic connection of the 'four chains', and the 'chain' began to be widely used in professional development research.

2.1. The Theoretical Study of 'Chain'

Hao Tiancong et al. (2019) pointed out that the disconnection of the "four chains" is the root cause of the low level of human resource supply in China. It is an important proposition for the connotative development of vocational education in the new era to deeply analyze the dilemma of industry-education integration and propose reform measures [2]. Nie Ting et al. (2019) explored national and local policies that could promote the formation of a new pattern of education public governance from the macro policy level, so as to better promote the integration of the "four chains" [3]. Guo Fuchun et al. (2020) analyzed high-level vocational schools and specialty construction projects with Chinese characteristics and believed that specialty construction should proactively meet the needs of regional industrial development, realize specialty setting and industry demand adaptation through specialty group construction, and promote the deep integration of "four chains" [4]. Liang Chengai et al. (2019) focused on the training of professional farmers and studied the organic connection between rural education chain, rural talent chain, rural industrial chain and innovation chain [5]. It can be seen that the "four chains" theory has a broad practical basis.

2.2. Research on the Evolution of 'Chain' Fusion

Sheng Fangfu et al. (2020) believe that the chain circulation system of industrial chain, capital chain, talent chain, policy chain and service chain should be improved to promote economic development [6]. Lin Kesong et al. (2019) proposed to promote the organic connection of course chain, talent chain and industrial chain by taking industrial convergence as the measurement standard and promote the integration and communication between courses within professional groups [7]. Ji Yaoxian (2020) constructed the "three-chain integration" school-enterprise two-way talent training mode of professional chain, talent chain and production-education chain [8]. In his speech at the 2020 Vocational Education Week, Minister of Education Chen Baosheng also adopted the concept of chain, emphasizing that vocational education should become an endogenous variable of economic activities and a "brick and mortar" and basic element of industrial chain, product chain, supply chain, capital chain and information chain. It can be seen that the chain fusion theory is constantly expanding and innovating in practice.

To sum up, although the chain integration theory has been widely used in educational practice, few studies have explored the path of digital transformation of finance and economics majors by taking the "four chains" of industry-education integration as the starting point, combining

the characteristics of digital economy and organically integrating enterprise chain and data chain to establish the "six chains integration" model. Therefore, this paper discusses digital economy under the background of how to play the pivotal role of data link in higher vocational colleges, how to dig talent chain core value, and how to implement and industrial chain, chain, innovation chain, the chain of education "six chain" depth fusion, to promote the coordinated development of talent supply and demand, enhance the adaptability of vocational education, it is of great significance.

3. The Practical Dilemma of Digital Transformation of Higher Vocational Finance Majors

In recent years, various higher vocational colleges have carried on the beneficial exploration to the specialty construction and obtained a series of achievements. Given that the construction of a single major often has the problem of narrow training perspective, the construction of a professional group can overcome the defect of insufficient composite degree of single professional talent training, but there are still the following problems, which hinder the process of digital transformation to a certain extent.

3.1. The Top-level Design of Value Logic is Missing in Professional Group Construction

There are many problems in the construction of professional groups, such as "group but not integration" and "appearance and distance", which lead to certain limitations in cross-border talent training and insufficient composite degree of talent training technology. Although many schools offer technical courses such as RPA and Python, there are still problems of unclear thread and insufficient integration between technology and financial business scenarios in technology enabling courses. Although the integration of industry and finance has been a consensus, there is still a problem of insufficient integration of finance and economics courses with business models and business scenarios.

3.2. The Chain Integration Lacks the Support of Technology and Talents

Chain fusion needs to be driven by data chain to provide technical and algorithmic support for digital transformation. At present, due to the lack of information technology personnel resources in the accounting industry, digital technology in the upgrading of the accounting industry chain, enterprise chain obstacles. The innovation of accounting products and services is difficult to realize the transformation of commercial value due to the lack of professional technical personnel and resources. The serious disconnection of industrial chain, enterprise chain, innovation chain, talent chain and education chain lead to the lack of power for digital upgrading of finance and economics industry and specialty. At present, digital finance can centralized the basic financial business of various industries and regions to improve the efficiency of business processing but put forward new requirements for professional division of labor and business process reconstruction, therefore, the construction of digital infrastructure and technical personnel team is imminent, conducive to the realization of chain integration.

3.3. Professional Digital Transformation Lacks Policy and Institutional Guarantee

The author believes that chain integration requires schools, enterprises, scientific research institutions and the government to participate in cooperation and form a joint force. However, from the perspective of the current external policy environment, cooperation between schools, enterprises and scientific research institutions still lacks government guidance and institutional support. As the main supplier of the talent chain, the school seeks to maximize the

quality of talent training and social benefits. As the main demand of enterprise chain, enterprises pursue the maximization of economic benefits. As the main body of innovation chain, scientific research institutions pursue the maximum conversion rate of results. The lack or absence of the top-level design of the government leads to the lack of perfect institutional guarantee for multi-party governance, which is reflected in the lack of resource guarantee for talent chain, the lack of motivation for enterprise chain participation, and the weakening of the leading function of innovation chain. Therefore, as the main body of policy making, the government needs to guide and coordinate multiple resources, improve the top-level design, and promote the rational flow and efficient allocation of resources between chains.

4. Analysis of the Model of "Six Chains Integration" for Digital Transformation of Finance and Economics Majors in Higher Vocational Colleges

4.1. 'Six Chains' Interaction Mechanism Analysis

To construct the "six chain integration" model of digital transformation of finance and economics major in higher vocational education, one is to take compound digital finance talent chain as the core, follow the law of student development in teaching, cultivate high-end technical talents to meet the transformation and upgrading of digital industry, and realize the integration of talent chain, industrial chain and enterprise chain; Second, in the establishment and construction of finance and economics majors, based on the talent demand data released by the industry and the enterprise side, actively revise the talent training program and adjust the curriculum system to meet the requirements of new digital financial positions, so as to achieve the matching of supply and demand data and promote the integration of education chain with industrial chain and enterprise chain; Third, based on the innovation demand formed by digital financial innovation chain in the construction of financial and economic majors, the key is to develop and apply innovative financial products and services, cultivate innovative talents and promote the industrialization of innovative achievements; Fourth, in the training process of finance and accounting professionals, based on advanced data thinking, explore the path of digital talent training, use a full range of digital teaching carrier, promote the reorganization of teaching content and reform of teaching methods, and realize the integration of talent chain and education chain.

4.2. 'Six Chains' Closed-loop Effect Analysis

The 'six chain integration' model forms a closed loop with data chain as the hub, and its role is to better realize the construction goal of financial and economic majors in line with the development of digital finance new career. In the context of digital economy, "six-chain integration" refers to the closed-loop of the whole process of digital upgrading and transformation of finance and economics majors by using the advanced digital technology under the innovation chain according to the new needs of digital industry chain and enterprise chain. From the data level, digital finance is the innovation product of industrial chain, enterprise chain and innovation chain in the field of finance and accounting. The data chain plays a key pivotal role. From the educational level, the digital transformation of finance and economics major in higher vocational colleges is to better solve the problem of who and how to train people in the era of digital economy. Through the integration of industry, science, education, innovation and application, it connects the talent chain, the education chain, the enterprise chain and the innovation chain. Its ultimate goal is to cultivate compound accounting talents to adapt to the development of digital economy. Therefore, with the data chain as the hub, the closed loop of industrial chain, enterprise chain, talent chain, education chain and innovation chain can give full play to the role of innovation subjects such as schools, enterprises,

scientific research institutions and governments and the core value of digital production factors. The closed loop model of "six chains integration" is shown in Figure 1.

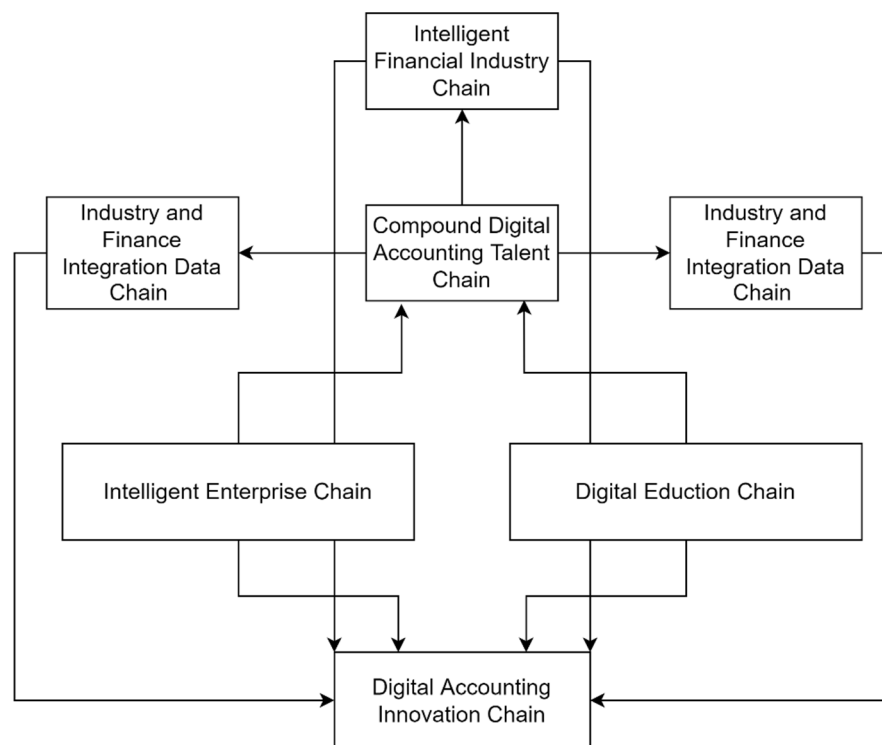


Figure 1. Closed-loop model of "Six-chain integration" for digital transformation of finance and economics majors in higher vocational colleges

5. Realization Path of Digital Transformation of Higher Vocational Finance and Economics Majors based on the Model of "Six Chains Integration"

The "six-chain integration" model, which takes talent chain as the core, data chain as the hub and industry chain as the guidance, provides a feasible path for digital transformation of finance and economics majors in higher vocational colleges.

5.1. Set Professional Personnel Training Goals with the Talent Chain as the Core

The smart Finance major aims at producer services, cultivating high-quality compound technical talents with digital thinking and digital professional skills and financial professional qualities of "integrity and innovation" who are "honest, technical, accounting, tax law and finance". To adapt to the rapid development of big data, artificial intelligence, cloud computing, block chain and other modern information technology needs, master the knowledge and technical skills of accounting, finance, audit, tax, finance, accounting, audit and tax services and financial services for producer services, Versatile and innovative technical talents capable of working in intelligent accounting, shared finance, business finance, intelligent audit, data management, account manager, financial consultant, digital marketing of financial products, etc.

5.2. To Clarify the Direction of Specialty Construction with the Guidance of Industrial Chain

The overall construction goal of the major is to build a smart finance major supported by science and technology, to become a cross-field financial professional talent training base and

industrial research base, and to cultivate high-quality compound smart financial and technical talents suitable for emerging positions in accounting and finance. To lead the innovation and reform of finance and economics majors, support the transformation and upgrading of finance and high-end business services, provide the "China plan" of Chinese service standards for the high-quality development of finance and high-end business services, and provide the "China model" based on the qualification framework for financial vocational education.

5.3. Build Digital Professional Group Curriculum System based on Data Chain

In order to adapt to the digital transformation and upgrading of financial industry, the curriculum system of professional group should be reconstructed. Focusing on artificial intelligence, big data and other new technologies and new positions, the company has transformed traditional courses, developed new courses, formulated curriculum standards, built a three-type curriculum system of "basic-core-expansion", and realized the integration of the curriculum system of finance and economics majors with "sharing at the basic level, splitting at the middle level and selecting from each other at the senior level". At the same time, the professional group curriculum system connects with the intelligent Finance and Taxation vocational skill level certificate and the national skill competition, realizing the integration of course certificate competition.

5.4. Build Digital Production, Education and Research Bases based on Enterprise Chains

In accordance with the requirements of "intelligent, professional and shared", the school training base will be upgraded and built. In line with the technological progress and industrial upgrading of the financial and economic industry, in the face of new forms of business and new occupations, we will establish off-campus training bases with industry leaders to meet the teaching and vocational training needs of smart finance majors. To cooperate with representative industries and enterprises to establish professional training bases or industrial colleges for the integration of finance, industry and education. Based on enterprise real task of industrial and social service center, with smart financial Shared services, finance and tax consulting services, audit services, asset appraisal services, rural services, with three kinds of wealth management service, financial service of science and technology, finance and economics development, and the application of finance and economics big data of social service robot software platform, information equipment and infrastructure, Set up management system, business process and supervision and inspection operation mechanism for carrying out real tasks.

5.5. Build a Digital Governance Model with Innovation Chain as the Starting Point

First of all, the government should be committed to the construction of digital governance model, the establishment of incentive system, stimulate enterprises, teachers, researchers and other subjects to participate in industrial innovation endogenous demand, stimulate the innovation of the subject of innovation power; Secondly, higher vocational colleges should establish and improve the quality assurance system conforming to the development of digital specialty. Through the graduate tracking feedback mechanism and social evaluation mechanism, the quality of professional talent training should be continuously improved, and the professional diagnosis and improvement system should be established. To study and formulate quality standards for each key link of professional construction, form corresponding evaluation standards for professional talent cultivation quality, teaching innovation team construction standards, implementation measures for teaching quality evaluation of part-time teachers in enterprises, build an internal quality assurance system of the specialty, and form a professional evaluation mechanism with clear guidance.

6. Conclusion

In the process of digital transformation of finance and economics majors in higher vocational colleges, we are faced with practical difficulties such as lack of top-level design of professional groups, lack of technical and talent support, and lack of policy and system guarantee. The "six-chain integration" closed-loop model takes the compound talent chain as the core and the data chain as the hub. Through the active supply of talent chain and education chain, it realizes the effective integration of demand side with industrial chain, enterprise chain and innovation chain. As the supplier of talent chain and education chain, higher vocational colleges should explore and reform the professional construction standard, talent training mode, talent training scheme and curriculum standard of digital transformation, so as to provide the basis for the education department to organize and formulate the teaching standard system. In addition, the university can unite with leading enterprises in the industry to establish professional intelligent finance, industry and education integration training base or industrial college, promote cross-regional co-construction and sharing, form a smart finance, industry and education ecological circle, innovate the new school-enterprise collaborative education mode, and provide the best scheme for the digital transformation of higher vocational finance and economics majors.

Acknowledgments

[fund project] this paper is the phased research achievement of the 2021Wenzhou Basic Scientific Research Project (Project No.: R20210056) "Research on the Realization Path of Digital Economy development in Wenzhou by Enabling Digital Transformation of Higher Vocational Colleges".

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