

Demand Changes and Cultivation Paths for High-Quality New Financial and Accounting Talents in the Era of Digital Intelligence

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Abstract: Cultivating new financial and accounting talents who are both adaptable to the development and changes in the digital and intelligent era and contribute to the development of the Guangdong-Hong Kong-Macao Greater Bay Area has become an important issue in the reform of higher education. This study conducts an in-depth analysis of the economic development trends and changes in demand for financial and accounting talents in the digital and intelligent era and the Guangdong-Hong Kong-Macao Greater Bay Area from the perspectives of industrial chain, job chain, technology chain, business chain, quality chain, and innovation chain. We establish specialized, digital, intelligent, and internationally oriented high-quality pathways for cultivating new financial and accounting talents. Furthermore, we propose a six-in-one educational practice model encompassing "job-oriented, course-centered, competition-driven, certificate-based, innovation-enhanced, and ideologically-led", aiming to provide theoretical support and practical references for universities to enhance the quality of financial and accounting talents.

1. Introduction

With the widespread application of new technologies such as big data, artificial intelligence, and the Internet of Things (IoT), especially in the context of the deep integration of the Guangdong-Hong Kong-Macao Greater Bay Area, there are unprecedented challenges and opportunities in cultivating financial and accounting talents who can not only adapt to the development and changes of the digital and intelligent era but also contribute to the development of the Greater Bay Area. Firstly, there are significant differences in finance, taxation, accounting supervision, and other fields among Guangdong, Chinese Hong Kong, and Chinese Macao, which limit the integrated development of the regional economy. Secondly, the intensification of international economic and trade cooperation and cross-border capital flows has also raised higher requirements for accounting cooperation and supervision. Thirdly, the application of digital technologies such as big data, cloud computing, and artificial intelligence is reshaping the accounting industry. Traditional manual bookkeeping and

simple financial analysis are no longer able to meet the development needs of enterprises in the Bay Area, making the accounting industry itself in an unprecedented transformation. How to cultivate high-quality digital and intelligent financial and accounting talents to meet the talent demands of the digital and intelligent era is also a question of the times. High-quality new financial and accounting talents in the digital and intelligent era are not only financial professionals who are familiar with local and international accounting rules and possess solid professional knowledge, but also management talents who can utilize digital skills such as data mining and analysis to provide high-quality accounting services and financial decision-making basis for promoting the intelligentization of business processes and the integration of industry and finance. Therefore, exploring how to cultivate new financial and accounting talents who are familiar with the policies and international rules of the three regions and possess high comprehensive abilities has become an important issue in the reform of higher education.

2. Research on the cultivation of new business talents

Existing research on the cultivation of new business talents in the digital and intelligent era mainly focuses on three aspects: First, it emphasizes the necessity and importance of cultivating new business talents. For instance, Yang (2018)^[1] discovered, from the perspective of the relationship between higher education and economic development, a mismatch between the higher education supply in the Guangdong-Hong Kong-Macao Greater Bay Area and the region's economic development, thereby underscoring the significance of higher education reform for the economic growth of the Greater Bay Area. Second, it defines the standards for new business talents. For instance, Xie and Zhou(2025)^[2] point out that new business talents are comprehensive development talents who meet the needs of the digital economy, possess interdisciplinary and cross-professional knowledge, digital literacy, and high competency. Third, it theoretically constructs approaches for cultivating new business talents. For instance, Xue et al. (2020)^[3], Xu and Wu (2020)^[4], and Li (2022)^[5] proposed establishing a collaborative educational mechanism that efficiently integrates internal and external resources, strategic elements, management practices, and innovation factors. Although existing research has achieved relatively rich results, most of it focuses on the importance of reforming cultivation models and theoretical construction, with less analysis and exploration of cultivation paths for high-quality new financial and accounting talents based on the actual economic development of the Guangdong-Hong Kong-Macao Greater Bay Area.

This study aims to delve into the trends of economic development in the digital intelligence era and the Guangdong-Hong Kong-Macao Greater Bay Area, as well as the evolving demands for financial and accounting talents. By doing so, it seeks to explore and establish a specialized, digitally intelligent, and internationally oriented high-quality new finance and accounting talent cultivation system and development pathway that aligns with the digital intelligence era and the integrated development of the Greater Bay Area. The objective is to provide theoretical support and practical references for universities to enhance the quality of financial and accounting talents and for the industrial transformation and upgrading of the Greater Bay Area.

3. Changes in demand for financial and accounting talents

From the perspective of the six chains—namely, the industrial chain, job chain, technology chain, business chain, quality chain, and innovation chain—this section analyzes the developmental characteristics of domestic enterprises, particularly those in the Guangdong-Hong Kong-Macao Greater Bay Area, and examines the corresponding changes in their demand for financial and accounting talents. It aims to identify and clarify the knowledge, skills, and qualities that high-quality new financial and accounting talents should possess in the digital intelligence era. The aim is to

cultivate high-quality new financial and accounting talents with an international perspective, strong comprehensive abilities, and familiarity with the policies of the three regions and international rules. This approach not only effectively meets the strategic needs of enterprises to go global and enhances their international market competitiveness but also promotes the deep integration of the economies of Guangdong, Chinese Hong Kong, and Chinese Macao.

3.1. Industrial chain

The domestic industrial chain is continuously improving, showing a trend from low-end manufacturing to high-end manufacturing, and from a single link to the integration of the entire industrial chain. Enterprises are placing greater emphasis on collaborative cooperation among upstream and downstream segments of the industrial chain to enhance overall competitiveness. The industrial chain in the Guangdong-Hong Kong-Macao Greater Bay Area is particularly characterized by a high degree of internationalization, diversification, and synergy. Leveraging its unique geographical location and policy advantages, the region has formed a complete industrial chain in areas such as high-end manufacturing, technological innovation, and financial services. This requires accounting professionals to possess an industrial chain mindset and be able to conduct cost accounting, risk assessment, and financial planning from the perspective of the entire industrial chain. For example, in terms of cost control, it is necessary to not only focus on internal costs within the enterprise but also consider the impact of cost fluctuations in upstream and downstream segments of the industrial chain on the enterprise. In financial planning, it is important to coordinate with the financial strategies of upstream and downstream enterprises in the industrial chain to achieve win-win development.

3.2. Job chain

With the acceleration of digital transformation in enterprises, the job chain is continuously extending and refining. Traditional accounting and finance positions, such as accountants and cashiers, are gradually evolving towards intelligence and automation. Meanwhile, some new positions have emerged, such as financial data analysts and financial shared service center specialists. The division of labor within enterprises is more explicit, and collaboration is closer, forming a complete job chain. Enterprises in the Greater Bay Area place greater emphasis on innovation and internationalization. In addition to traditional accounting and financial positions, there are also positions related to technological innovation and cross-border business, such as blockchain financial application specialists and cross-border financial advisors. These positions impose higher demands on the professional knowledge and skills of financial and accounting talents, requiring cross-disciplinary knowledge and innovative capabilities. For instance, blockchain financial application specialists need to understand the principles and application scenarios of blockchain technology and be able to integrate it with financial work to enhance efficiency and transparency. Cross-border financial advisors must be familiar with international financial market regulations and cross-border financial products, providing professional cross-border financial advisory services to enterprises, as well as conducting financial data analysis and offering financial decision-making support.

3.3. Technology chain

Digital technologies such as big data, artificial intelligence, and cloud computing are increasingly being applied in enterprises, enabling centralized management and sharing of financial data. Enterprises are gradually exploring the use of artificial intelligence technology for financial forecasting and decision support, utilizing blockchain technology to achieve secure and efficient

cross-border payments and settlements, and employing IoT technology for real-time monitoring of production equipment and precise cost accounting. For financial personnel, it is necessary not only to master data analysis tools and methods, extract valuable information from massive financial data, and provide support for corporate decision-making, but also to possess certain programming skills and knowledge of blockchain technology, enabling them to participate in the design and development of blockchain financial systems. Additionally, in terms of IoT cost accounting, it is important to understand the principles and application scenarios of IoT technology, and be able to establish corresponding cost accounting models.

3.4. Business chain

As the business chain of enterprises continues to expand and extend, shifting from traditional product sales to providing comprehensive solutions and services, the requirements for the integration ability of accounting personnel are becoming increasingly high. They are expected not only to have a deep understanding of the business processes and needs of the enterprise, providing financial support and decision-making basis for the business development, but also to possess cross-disciplinary knowledge and skills, capable of handling financial issues in cross-border business, such as international settlement and foreign exchange risk management

3.5. Quality chain

Enterprises are placing increasingly stringent demands on product quality and service quality, making quality chain management a crucial means for enhancing competitiveness. This is particularly true for enterprises in the Guangdong-Hong Kong-Macao Greater Bay Area, which place a strong emphasis on the certification and application of international quality standards. Financial and accounting talents should possess a quality cost awareness, enabling them to participate in the management and control of corporate quality costs and conduct financial accounting and reporting in accordance with international quality standards. For instance, when handling international business, they should understand the impact of international quality standards on product costs and pricing, and be able to accurately account for product quality costs.

3.6. Innovation chain

Innovation has become the core driving force for enterprise development, prompting companies to continuously increase their investment in research and development to spur technological innovation, product innovation, and business model innovation. Financial and accounting talents must possess an innovative mindset and capabilities, enabling them to stay attuned to industry trends and technological advancements. They should be able to propose innovative financial concepts and methods, offering fresh perspectives and solutions to enhance corporate financial management and drive business development.

4. Training path for new financial and accounting talents

Based on the concept of "cross-sector collaboration, integration, and synergy", we gather forces from governments, universities, enterprises, institutions, and other parties to explore and build a comprehensive educational model. This model focuses on enhancing students' comprehensive qualities and embodies the six-in-one educational practice of "job-oriented, course-centered, competition-driven, certificate-based, innovation-enhanced, and ideologically-led". Under the overall coordination and leadership of the school, we effectively gather industrial resources, training venues,

competition platforms, entrepreneurial environments, and other elements from industries, enterprises, and social institutions. Based on industry demand forecasts and student learning analysis, we develop tailored talent cultivation plans that optimize objectives, curricula, class schedules, teaching processes, assessment methods, and graduation requirements. Furthermore, we promote the close alignment of the educational chain in accounting and finance with industrial chains, technological chains, and entrepreneurial chains, jointly cultivating high-quality new financial and accounting talents who possess both moral integrity and technical proficiency, emphasize theoretical knowledge and practical application, and integrate work-based learning with academic study.

4.1. Job-oriented

Take the actual needs of professional positions as the starting and ending points of talent cultivation, closely cooperate with industry enterprises, conduct in-depth job research, and gain a detailed understanding of specific information about job content, skill requirements, professional ethics, and other aspects of different professional positions. Based on the results of job research, we construct a curriculum system that precisely aligns with it. We break down the knowledge and skills required for the position into specific course modules to ensure that students can gradually master the abilities required by the position during the learning process. By simulating real work scenarios, we design practical teaching links to enable students to gain practical experience in job-related work, thereby enhancing their perceptual knowledge and practical operation skills for the job.

4.2. Course-centered

Provide students with systematic and comprehensive professional knowledge and theoretical support to solidify their professional theoretical foundation. According to industry development trends and changes in job requirements, we should timely update and optimize course content to ensure its progressiveness and practicality. We should adopt diversified teaching methods, such as case study method, project-based learning, inquiry-based teaching method, etc., to stimulate students' interest and initiative in learning and improve teaching effectiveness. By introducing real-world corporate financial cases, we encourage students to analyze the financial issues in the cases and propose solutions, cultivating their ability to analyze and solve problems. We build a rich curriculum resource, including textbooks, courseware, online courses, teaching case libraries, etc., to provide students with diversified learning channels and resource support.

4.3. Competition-driven

Encourage students to participate in various academic and skill-based competitions to foster their competitive spirit and innovative thinking, while simultaneously improving their practical abilities and overall competence. We transform the achievements and outcomes of these competitions into valuable teaching resources to drive enhancements in teaching quality. For example, we compile outstanding works and innovative solutions from competitions into teaching case studies and integrate them into the curriculum, thereby motivating teachers to refine their instructional methods and content.

4.4. Certificate-based

Encourage students to obtain relevant professional qualification certificates, assess their learning outcomes and professional abilities, and provide strong comprehensive support, including career guidance and job - placement assistance, for their employment and career development. We should

establish a mutual recognition mechanism between certificates and credits, linking the professional qualification certificates obtained by students with course credits.

4.5. Innovation-enhanced

Emphasize the cultivation of students' innovative awareness and practical abilities by implementing entrepreneurship and innovation education and practical activities, enhancing their overall competence and career competitiveness. We have assembled a team of innovative entrepreneurship mentors, comprising in-house teachers, industry experts, and corporate executives, to provide students with professional guidance and consulting services. For instance, we invite successful entrepreneurs to serve as mentors, sharing their entrepreneurial experiences and stories with students, and guiding them in carrying out entrepreneurial projects.

4.6. Ideologically-led

Guide students to establish correct values and a professional outlook through ideological and political education as well as vocational ethics education, fostering their sense of social responsibility and professional ethics. We should invite corporate executives and outstanding employees to deliver lectures and engage in exchange activities on corporate culture at the university, enabling students to understand the competency requirements of enterprises for talent. At the same time, we should also organize students to visit enterprises, allowing them to personally experience the working environment and cultural atmosphere of the enterprises, and enhancing their professional awareness and professional qualities.

5. Conclusion

The cultivation of high-quality financial and accounting talents relies on the establishment of efficient collaborative mechanisms, innovative training mechanisms, and effective support mechanisms. Specifically, the effective implementation of the comprehensive educational model integrating "job roles, courses, competitions, certifications, innovation, and critical thinking" requires close collaboration among various stakeholders, including governments, universities, enterprises, and institutions, to establish a highly efficient collaborative mechanism. Through this mechanism, universities are encouraged to reconstruct, optimize, and innovate in terms of training objectives, processes, and evaluations. This approach aims to cultivate high-quality talents with solid professional foundations, strong practical abilities, innovative spirits, and good professional ethics, thereby meeting the demands of society and industries for talent.

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