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Research on the Reconstruction of Accounting Talent Cultivation Model under the Framework of Dual Carbon Goals and ESG Literacy

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Abstract: In the context of the dual carbon goals, enterprises are increasingly in urgent need of accounting talents with ESG literacy. Traditional accounting training models struggle to adapt to the demands of green transformation, facing issues such as curriculum disconnection, insufficient practice, and weak faculty. This paper constructs a three-dimensional and three-tier capability framework based on ESG literacy and proposes a four-in-one training model reconstruction path, encompassing curriculum integration, teaching innovation, faculty development, and evaluation feedback. It promotes the deep integration of accounting education and sustainable development, providing theoretical support and practical solutions for cultivating composite accounting talents.

Keywords: Dual carbon goals; ESG literacy; Accounting talent cultivation

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1. Introduction

The dual carbon goal has emerged as a national strategy in China, profoundly reshaping the logic of economic and social operations. Traditional accounting education, oriented towards economic indicators and emphasizing accounting and compliance, struggles to adapt to the demand for versatile talents in low-carbon economy, such as those skilled in ESG information disclosure and carbon asset management [1].

Currently, ESG has evolved from a differentiated indicator to a compliance requirement and core value for global enterprises. The International Sustainability Disclosure Standards (ISDS) require the disclosure of climate-related financial impacts. Domestically, the Ministry of Finance's *Guidelines for Corporate Sustainability Disclosure and stock exchange guidelines* have established a mandatory and precise disclosure system. The ESG transformation in the capital market has generated a huge demand for talent. In the next five years, China will face a significant shortage of ESG professionals, and the proportion of composite talents with both accounting skills and ESG literacy is low. This supply-demand imbalance will hinder the development of the green economy [2].

However, accounting education in universities lags significantly in cultivating sustainable development capabilities. The curriculum system still centers around traditional finance, lacking integration with ESG and carbon accounting, and fails to incorporate ISDS and domestic disclosure standards. Teaching emphasizes theory over practice, with insufficient practical training in carbon accounting, ESG report preparation, and climate risk assessment. The lack of interdisciplinary competence and industry experience among teachers makes it difficult for students to be competent in corporate sustainable information disclosure and green financial decision-making [3].

Against this backdrop, reconstructing the accounting talent cultivation model in universities based on the ESG literacy framework has become a key path to break the talent bottleneck. This paper, grounded in the national dual carbon strategy and the transformation of the capital market, explores the core dimensions and construction paths of ESG literacy, analyzes the pain points of the current cultivation model, and proposes a systematic reconstruction plan that integrates curriculum systems, innovates teaching methods, strengthens faculty development, and optimizes evaluation mechanisms. It promotes the deep integration of accounting education with the green economy, provides theoretical support and practical guidance for cultivating versatile and sustainable accounting talents that meet the needs of the times, and helps achieve the dual carbon goals and high-quality economic and social development [4].

2. New requirements for the capabilities of accounting talents

2.1. Analysis of policy and institutional environment

Policies and institutions are the core guidance for guiding the upgrading of accounting talent capabilities [5]. The improvement of China's "dual-carbon" policy system, the refinement of the ESG information disclosure system, and the collaborative alignment with international sustainable standards have jointly established an institutional framework for the requirements of accounting talent capabilities, compelling talents to enhance their sustainable development literacy. The "1+N" dual-carbon policy system clarifies that enterprises need to strengthen green financial management, accurately calculate carbon-emission costs, quantify the value of carbon assets, and require accounting talent to grasp the essence of policies and translate them into financial operational practices. The ESG information disclosure guidelines of the Shanghai and Shenzhen Stock Exchanges further refine responsibilities, emphasizing that accounting talents should participate in the preparation and review of ESG reports, accurately align with disclosure requirements, achieve effective integration of ESG and financial information, and prevent compliance risks. The "Enterprise Sustainable Disclosure Standards (Draft for Comments)" issued by the Ministry of Finance establishes a unified standard, requiring talents to be proficient in disclosure norms and accounting methods, accurately identify significant sustainable information, scientifically quantify the impact of climate risks and carbon costs on finance, and ensure the professionalism and compliance of information disclosure [6]. The aforementioned systems jointly promote the evolution of the accounting talent capability structure towards a composite and specialized direction, highlighting the strategic transformation of accounting functions in the context of sustainable development [7].

2.2. Actual industry demand

Driven by policy and institutional frameworks, the actual demand for accounting talents within the industry has shifted from "accounting and auditing" to "sustainable development and composite skills" [8]. ESG

capabilities have become core competitiveness, exhibiting characteristics of differentiation and specialization. As the main body of dual carbon and ESG practices, enterprises explicitly require accounting personnel to possess carbon accounting, ESG report preparation, and assurance capabilities. They need to master accounting standards, coordinate financial disclosures, participate in green strategy and investment decisions, and possess carbon finance and green financial management capabilities. Accounting firms are actively planning for ESG audits, with leading institutions establishing specialized departments that urgently need talents with both accounting expertise and ESG literacy, capable of interpreting standards, designing carbon accounting and auditing. Driven by green finance, financial institutions require accounting talents to participate in green credit review and green bond issuance, assessing the impact of ESG on financial performance, evaluating climate and carbon risks, and possessing carbon finance pricing and ESG rating capabilities. In recent years, the annual growth rate of ESG-related job postings has exceeded 30%, with continuously increasing professional capability requirements for talent. The sustainable development orientation is profoundly reshaping the demand pattern for accounting talents.

2.3. Capability gap diagnosis

Although policies and industry demands have clearly outlined the ESG competency requirements for accounting professionals, there remains a significant capability gap in China's accounting talent pool, especially among recent college graduates, in adapting to the dual carbon and ESG development. This gap is primarily manifested in three aspects: knowledge structure, technical tools, and values, forming a structural contradiction of "demand upgrading and supply lagging behind". The disconnection in knowledge structure is the core issue. Most talents lack systematic learning in environmental accounting and carbon accounting, are unfamiliar with carbon accounting standards and ESG disclosure guidelines, and struggle to handle carbon assets and quantify climate risks. The absence of technical tools exacerbates this shortcoming, with widespread lack of proficiency in professional tools such as carbon inventory software and ESG databases. Digital capabilities are limited to traditional finance, with a lack of data modeling and analysis skills. Deviations in values pose a hidden obstacle. Traditional "profit-oriented" education leads to an emphasis on short-term profits and a disregard for long-term sustainability [9]. Some individuals lack sufficient recognition of ESG concepts, which can easily lead to issues such as perfunctory disclosures and data falsification, deviating from the essential requirements of the dual carbon and ESG initiatives. The combination of these three major gaps severely restricts the progress of green transformation.

3. Accounting talent competency framework based on ESG literacy

3.1. Framework design principles

ESG has become a core issue in regulation and investment, and the proficiency of accounting talents directly affects the quality of corporate ESG information and risk management [10]. To address the disconnect between traditional training models and practical needs, it is imperative to build a scientific and systematic ESG accounting talent competency framework. This framework needs to follow four core principles: policy alignment, to ensure that talents meet compliance requirements; disciplinary integration, which breaks down barriers within the accounting discipline to achieve coordinated development of professional and ESG competencies; competency-oriented, which emphasizes the abilities to solve practical problems; operability, in order to ensure that the framework is feasible and scalable. These four principles collaboratively ensure the scientific, systematic, and practical nature of the framework, providing strong support for the cultivation of

composite ESG accounting talents [11].

3.2. Three-dimensional and three-tier ESG literacy framework

Based on the principles of policy alignment, disciplinary integration, capability orientation, and operability, this paper proposes a three-dimensional, three-layered ESG literacy accounting talent capability framework. The three dimensions are Environment, Society, and Governance, encompassing the interactions between enterprises and nature, stakeholders, and internal governance. The Environment dimension requires mastery of green financial skills such as carbon accounting and resource management. The Society dimension focuses on employee rights, community development, and achieving social value synergy. The Governance dimension emphasizes internal control and compliance to prevent governance risks. The three layers are knowledge, capability, and values, progressing from one layer to the next. The knowledge layer is the foundation for ESG theory and policy. The capability layer focuses on practical skills. The values layer advocates the concept of sustainable development and strengthening responsibility. The three dimensions define the scope of literacy, and the three layers clarify the growth path. They mutually support each other, forming a systematic and implementable capability model that fully responds to the comprehensive requirements of the ESG era for accounting talents [12].

3.3. Core knowledge points and ability indicators under each dimension

For the Environmental Dimension, the knowledge layer for building green finance and carbon management capabilities encompasses environmental policies and regulations, environmental accounting theory, environmental standards and disclosure, and environmental business knowledge. The capability layer focuses on five core capabilities: environmental information accounting capability, carbon asset management capability, environmental information disclosure capability, environmental risk management and control capability, and green decision-making support capability [13].

For the Social Dimension, the knowledge layer for enhancing social responsibility and value alignment capabilities includes social responsibility policies, social responsibility accounting theory, knowledge of social issues, and stakeholder management. The capability layer includes five major indicators: social responsibility accounting capability, social information disclosure capability, social risk identification capability, stakeholder communication capability, and social value evaluation capability [14].

For Governance Dimension, strengthening the knowledge layer for compliance governance and decision support capability encompasses corporate governance regulations, governance accounting knowledge, governance standards and frameworks, compliance and internal control. The capability layer includes governance structure participation capability, internal control and compliance capability, ESG audit capability, governance information disclosure capability, and governance decision support capability [15].

4. Reconstruction path of the accounting talent cultivation model

4.1. Optimization of the curriculum system

The curriculum system is the core carrier of talent cultivation. Universities should break through the limitations of traditional accounting education, which emphasizes professional knowledge and disregards literacy, and focuses on theory and neglects integration. By adopting the dual approach of adding new characteristic courses + transforming core courses, a curriculum system with deep integration of profession + ESG should be constructed. New characteristic courses, such as *ESG Reporting,* should be added to

systematically cover topics. Elective courses such as *ESG Risk Management* should be offered in combination with the characteristics of the institution. Core courses should be transformed by embedding modules such as environmental asset measurement, ESG auditing, and green cost accounting, incorporating ESG cases and practices. Through curriculum reconstruction, professional knowledge and ESG literacy can be synergistically enhanced, filling the gap in talent literacy and promoting the transformation and upgrading of accounting education towards sustainable development.

4.2. Innovation in teaching methods

Traditional accounting teaching emphasizes theory over practice, making it difficult to meet the demand for practical and innovative abilities in ESG literacy. Universities should implement a diversified teaching model of case and practical operation. Case teaching focuses on benchmark enterprises, analyzing practices such as carbon accounting and ESG disclosure. Through discussion and debate, students' analytical and critical thinking abilities are enhanced, supplemented by failure cases to strengthen risk awareness. Practical teaching designs simulate carbon inventory and ESG due diligence projects, where students are divided into groups to play different roles. At the same time, in line with the trend of digitalization and intelligence, carbon accounting software and ESG reporting systems are introduced, integrating big data and AI technology. Data mining and risk early warning are taught to enhance students' efficiency and accuracy in handling ESG information, cultivating compound accounting talents that meet the needs of enterprises' digital and intelligent management.

4.3. Teacher and resource development

Teachers and practical resources are the core guarantees for integrating ESG literacy into accounting education. To address the issue of weak ESG capabilities among teachers, we should improve the training mechanism, regularly conduct specialized training on policy standards, carbon accounting, digital and intelligent tools, invite enterprise experts to teach, organize teachers to visit benchmarking enterprises and firms, promote the transformation of practical experience into teaching content, enhance teaching effectiveness, and introduce ESG professionals to optimize the teacher structure. In terms of practical resource construction, we should deepen cooperation between schools and enterprises, jointly build ESG practice bases, clarify teaching functions and assessment standards with enterprises, appoint ESG leaders as practical mentors, and guide students to carry out real projects such as carbon accounting, ESG report preparation, and auditing. Organize students to participate in internships and short-term practical training, deeply engage in enterprise practice, and enhance practical operation abilities. Schools and enterprises should collaborate to develop teaching cases and practical training projects, achieve precise alignment between teaching content and industry needs, and provide strong support for cultivating high-quality accounting talents with ESG literacy.

4.4. Evaluation and feedback mechanism

Evaluation and feedback are crucial for ensuring the quality of ESG accounting talent cultivation. Universities should break away from the single knowledge evaluation model and establish a three-dimensional ESG literacy achievement indicator system. Knowledge level assesses policy standards and mastery of carbon accounting, etc. Ability level focuses on carbon accounting, report preparation, and the application of digital and intelligent tools. Value level evaluates sustainable development concepts and integrity awareness. A combination of process-based + summative evaluations is adopted, covering classroom performance, project practice, and skill competitions, to ensure comprehensiveness and objectivity. Third-party micro-certifications,

such as CFA ESG Investing and Carbon Accountant, are introduced and integrated into the curriculum system to enhance students' employment competitiveness. A normalized feedback mechanism is established to regularly collect opinions from students, teachers, and enterprises. Combining evaluation data, the curriculum, teaching, and faculty are continuously optimized, forming a closed loop of cultivation-evaluation-feedback-optimization. This continuously improves the relevance and effectiveness of talent cultivation, accurately aligning with industry needs.

5. Conclusion

Traditional accounting talent cultivation models face limitations, making it difficult to adapt to the requirements of the new era. This article takes ESG literacy as the core focus, systematically reconstructs the accounting talent cultivation model through theoretical analysis, framework construction, and path design, and draws the following core conclusions:

Firstly, ESG literacy is an essential core competency for accounting professionals. With the continuous emergence of new accounting services such as carbon accounting, ESG information disclosure, and green risk management, accounting professionals need to master interdisciplinary ESG knowledge, practical skills, and sustainable development concepts. Traditional training models urgently need to be transformed and upgraded.

Secondly, based on the principles of policy alignment, disciplinary integration, competency orientation, and operability, this paper proposes a three-dimensional and three-layer competency framework with dimensions of ESG and levels of knowledge, competency, and values. It clarifies the core indicators at each level, fills the theoretical gap in ESG literacy training for accounting talents, and provides a scientific basis for training and evaluation.

Thirdly, propose a reconstruction path for the four-in-one training model. Centered around the curriculum system, achieve deep integration between majors and ESG through adding new characteristic courses + transforming core courses; in terms of teaching methods, promote case teaching, project-based learning, and the application of digital and intelligent tools to facilitate the transformation of knowledge into ability; in terms of teacher and resource construction, strengthen ESG training for teachers, promote the joint construction of practice bases by schools and enterprises, and enhance the support for teaching practice; in terms of evaluation mechanisms, construct a competency achievement evaluation system combining process-oriented + summative, introduce third-party micro-certificates, establish a closed loop of training-evaluation-feedback-optimization, and comprehensively improve the quality of training.

Fourthly, deepen the integration logic of dual carbon goals, ESG literacy, and the accounting profession. Dual carbon is the trend of the times, ESG literacy is the core content, and the accounting profession is the carrier. The integration of the three is the key to reconstructing the talent cultivation model. Only by integrating ESG literacy throughout the entire process of talent cultivation can we cultivate composite accounting talents who can serve the transformation of the industry and support national strategies.

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