

Research on the Teaching Reform of Finance and Taxation Courses Based on the Background of Integration of Industry and Finance

Weihoa Zhang

School of International Business, Zhejiang Yuexiu University, Shaoxing, China
Email: 82723906@qq.com

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Abstract

At present, there are some problems in the teaching of finance and taxation courses in colleges and universities, such as the disconnection between curriculum setting and practice, the traditional teaching methods, and the lack of understanding of the integration of industry and finance among teachers and students, so it is urgent to carry out teaching reform to meet the development needs of the industry. This paper puts forward solutions from the three levels of knowledge system, practical ability and professional quality, which provide a useful reference for the teaching reform of finance and taxation courses in the digital era.

Keywords

Integration of Industry and Finance, Finance and Taxation Courses, Teaching Reform

1. Introduction

The integration of business and finance refers to the deep embedding of financial management into the whole life cycle of business activities through process interoperability, data sharing and strategic collaboration between the business department and the financial department of the enterprise, so as to realize the organic unity of business flow, capital flow and information flow. From the traditional “financial data reflects business results” to “finance participates in business decision-making and drives business optimization”, the integration of industry and finance has broken through departmental barriers and built a new management model with value creation as the core. Its core value is embodied in three levels: at the strategic level, finance provides a basis for business strategy formu-

lation through data analysis, and assists enterprises in accurately positioning market opportunities and risks, such as evaluating the feasibility of new business development through cost-benefit analysis; at the operational level, the integration of industry and finance realizes the dynamic linkage of business processes and financial control, and optimizes the efficiency of resource allocation. At the decision-making level, real-time and accurate business and financial data support the management to quickly respond to market changes. For example, retail enterprises can dynamically adjust inventory strategies and promotion plans based on the correlation analysis of sales data and financial indicators. This integration not only improves the internal management efficiency of enterprises but also lays the foundation for the sustainable development of enterprises in the digital era (Meng & Zhang, 2024).

2. Survey on the Teaching Status of Finance and Taxation Courses

2.1. Curriculum and Teaching Content Analysis

At present, the financial and taxation curriculum system of most colleges and universities is characterized by rich theoretical knowledge but insufficient practical orientation. In terms of course structure, basic theoretical courses such as “Public Finance”, “Tax Law” and “Principles of Accounting” account for more than 60% of the total credits, and these courses focus on explaining the principles of fiscal revenue and expenditure, tax laws and accounting rules. For example, emerging content such as new tax collection and management models and green fiscal and tax policies in the era of digital economy are only covered in a few elective courses, and the class time accounts for less than 10% of the total courses. In terms of teaching content, the lag in updating textbooks is a common problem. Taking the tax law textbook as an example, more than 40% of colleges and universities are still using the version three years ago, which makes it difficult to cover important policy changes in recent years, such as the adjustment of VAT rates and the special additional deduction of individual income tax. The content of the course is out of touch with the actual business scenarios of enterprises, and the common tax planning and integration of business and financial data in the financial and tax practice of enterprises are only presented in the form of theoretical cases in teaching, lacking real business data and process simulation.

2.2. Current Status of Teaching Methods and Practices

In terms of teaching methods, traditional lecture-based teaching still dominates. In classroom teaching, 75% of the courses used by teachers to use “blackboard + PPT” one-way knowledge indoctrination, and innovative methods such as interactive teaching, case teaching, and project-based teaching were rarely applied. Even if case teaching is adopted, most of the cases are fictitious or outdated, such as the classic case used in the “Tax Planning” course of a university is still stuck in the tax treatment of corporate mergers and acquisitions in 2020, which cannot

reflect the current complex and changeable business environment. There are obvious shortcomings in practical teaching. The on-campus simulation training platform has a single function, and most of them can only realize basic accounting and simple tax declaration operations, and lack financial and tax simulation of the whole business process of the enterprise. The construction of off-campus internship bases is insufficient, the number of cooperative enterprises is limited, and students are mostly engaged in basic data collation during the internship, which makes it difficult for students to get in touch with core financial and taxation business. According to the survey, only 25% of students have participated in a complete financial and tax project during the internship, and 70% of students believe that the internship content is not related to what they have learned in class.

2.3. Survey Data of Teachers and Students' Cognition of the Integration of Industry and Finance

According to the survey on the perception of the integration of industry and finance, the results show that only 35% of the teachers have a deep understanding of the integration of industry and finance, and some teachers simply equate the integration of industry and finance with the communication between finance and business departments, and lack the awareness of its strategic synergy value. In teaching, only 20% of teachers tried to integrate the concept of integration of industry and finance into the curriculum design, and most of them were presented in the form of adding several special lectures, which failed to form a systematic teaching content system. In terms of students, less than 40% of students have a basic understanding of the concept of industry-finance integration, and 75% of students say that they have not received systematic industry-finance integration courses during their time at school. In the employment expectation survey, although 80% of students hope to enter enterprises to engage in comprehensive financial and tax management positions, due to the lack of knowledge and skills related to the integration of industry and finance, most of them can only apply for basic financial accounting positions when they are actually employed. The survey data clearly reflect that there is great room for improvement in the popularization and practice of the concept of integration of industry and finance in the teaching of finance and taxation courses.

3. Existing Problems and Challenges

3.1. The Curriculum System Is out of Touch with the Business Scenario

At present, the construction of the financial and taxation curriculum system is still guided by the logic of subject knowledge, which is seriously out of touch with the actual business scenarios of enterprises. The curriculum emphasizes too much on the systematization and completeness of fiscal and taxation theories, and divides the knowledge of public finance, accounting, taxation and other disciplines into independent modules, lacking the integration and integration of interdisciplinary

knowledge. For example, in the real operation of an enterprise, project investment decisions need to be made using the cost-benefit analysis of financial management, the interpretation of preferential tax policies of the tax law, and the analysis of financial statements of accounting, but in the curriculum system, these knowledge are scattered in different courses, and it is difficult for students to form systematic business analysis thinking. The course content update mechanism is rigid, and it is unable to keep up with the pace of fiscal and taxation policies and industry development in a timely manner. In recent years, China's fiscal and taxation policies have been frequently adjusted, such as the large-scale VAT refund policy and the increase in the proportion of additional deductions for enterprise R&D expenses, while the adjustment of college course content often lags behind by 1 - 2 years. Taking a university as an example, its 2023 "Enterprise Tax Management" course syllabus has not yet included the incremental VAT refund policy for advanced manufacturing implemented in 2022, resulting in a deviation between the knowledge learned by students and the actual operation of the enterprise. In addition, the lack of attention to emerging business scenarios, such as cross-border e-commerce fiscal and tax processing, tax collection, and management under the sharing economy model, etc., makes it difficult for students to adapt to the needs of fiscal and taxation work in the context of digitalization and globalization (Zhang & Li, 2024).

3.2. Insufficient Application of Practical Teaching Resources and Technology

There is a serious shortage of practical teaching resources, which makes it difficult to meet the needs of students' practical ability training. The investment in the construction of the on-campus training platform is insufficient, and the financial and tax simulation laboratory equipment of most colleges and universities is outdated and the software version is outdated. For example, the tax training software of a provincial university is stuck in the 2018 version, which cannot simulate new tax services such as electronic invoice issuance and all-electronic invoice management. Due to the limited number of off-campus internship bases and the cooperation is a mere formality, enterprises are reluctant to let students get in touch with core financial and taxation business due to trade secret protection and cost considerations, and student internships are mostly limited to basic work such as voucher binding and invoice sorting, which is difficult to obtain substantive practical training. In terms of technology application, the teaching of finance and taxation has not fully integrated emerging technologies such as big data and artificial intelligence. Although some colleges and universities have introduced financial robots and intelligent financial and taxation training systems, in actual teaching, these technologies are only used for demonstration or simple operation exercises, and have not been truly integrated with the teaching content. For example, the intelligent finance and taxation system has the functions of automatically identifying invoices and intelligently generating accounting vouchers, but teachers only require students to complete basic operations in teaching, and do not guide stu-

dents to use system data for financial analysis and tax planning, so that students cannot master the core skills of finance and taxation in the digital era. In addition, the application of cutting-edge technologies such as virtual simulation and blockchain in finance and taxation teaching is even rarer, which makes it difficult to meet the requirements of cultivating compound finance and taxation talents.

3.3. The Ability of the Faculty to Integrate Industry and Finance Needs to Be Improved Urgently

There is a general problem of disconnection between theory and practice in the teaching team of finance and taxation majors, and the teaching ability of the integration of industry and finance is insufficient (Yu, 2022). Most of the teachers directly enter the school to teach after graduating from colleges and universities, lack of experience in corporate finance and taxation, and have a limited understanding of the actual business process and pain points of financial and tax management. In the process of teaching, it is difficult for teachers to integrate real business cases into the classroom, so they can only explain theoretical knowledge according to the textbook. For example, when teaching tax planning courses, teachers lack practical experience in enterprises, and most of the case designs are based on textbooks or online case adaptations, which lack authenticity and practicability. The training and development mechanism of teachers is not perfect, and it is difficult to improve the teaching ability of teachers to integrate industry and finance. The evaluation system of teachers in colleges and universities focuses on scientific research achievements, and teachers' enthusiasm to participate in enterprise practice and teaching reform is not high. Although some colleges and universities organize teachers to participate in financial and taxation practice training, the training content is mostly theoretical knowledge update, and there is a lack of targeted training on the teaching methods and practical skills of the integration of industry and finance. In addition, the talent exchange mechanism between universities and enterprises is not smooth, and it is difficult for teachers to obtain the latest financial and tax management experience and technical application information of enterprises, resulting in a disconnect between teaching content and industry development, and unable to effectively cultivate students' ability to integrate industry and finance.

4. Solutions to Realize the Integration of Industry and Finance

4.1. Integrate Theoretical Knowledge and Business Knowledge Modules

In the traditional finance and taxation curriculum system, financial knowledge and business knowledge are separated from each other, which makes it difficult for students to establish systematic thinking. The reconstruction of the curriculum system needs to break the boundaries of disciplines, take the actual business process of the enterprise as the main line, and deeply integrate professional knowledge, such as finance, accounting, and taxation, with business knowledge,

such as marketing and supply chain management. For example, in the course of “Business Decision-making”, focusing on the business scenario of new product development and production, financial budgeting, cost accounting, tax planning, market demand analysis, product pricing strategy, supply chain cost control, etc. are organically integrated, so that students can understand how financial and tax knowledge can support business decisions in the process of solving practical problems, and at the same time grasp the impact of business activities on financial and tax results. In order to achieve the effective integration of knowledge modules, a modular teaching method can be adopted to divide the relevant knowledge content into different topic modules. For example, the “Business and Finance Integration Basic Module” is set up, which covers an overview of enterprise business processes, basic financial concepts and tools; the “Business and Finance Collaborative Application Module” focuses on the financial and tax treatment of core business links such as sales and collection, procurement and payment; “Business and Finance Strategic Decision-making Module” discusses financial and tax planning and risk management in strategic activities such as corporate investment and financing, mergers and acquisitions, etc. Through this hierarchical and progressive modular design, it helps students gradually build a complete knowledge system of industry and finance integration and improve their comprehensive application ability. It is also possible to develop interdisciplinary course groups, such as setting up a “Digital Industry and Finance Integration Innovation” course group, which can be composed of courses such as “Big Data Finance and Tax Analysis” (Big data finance and tax analysis is the process of collecting, cleaning, mining, and analyzing massive amounts of data related to enterprise finance and taxation (including transaction records, invoice information, bank statements, tax declaration data, etc.) using big data technology. Its core goal is to improve financial management efficiency, reduce tax risks, and optimize decision-making.), “Intelligent Financial Sharing” (Intelligent financial sharing refers to the use of intelligent technologies such as artificial intelligence, big data, and cloud computing to break down information barriers and resource silos between financial institutions, and achieve efficient circulation and collaborative utilization of financial data, technology, services, and infrastructure.), and “Business and Finance Integration Project Management” (Integrated project management of business and finance “refers to the deep integration of business operations and financial management of a project, achieving unified planning, execution, and monitoring of business and financial goals throughout the project lifecycle through process integration, data exchange, and collaborative mechanisms. Its core is to break down departmental barriers between business and finance and form an efficient and interconnected management model (Zhai & Chen, 2025). Each course is relatively independent of each other, but also interrelated and progressive. “Big Data Financial and Tax Analysis” teaches students to use Python, SQL and other tools to collect, clean and analyze financial and tax data; “Intelligent Financial Sharing” guides students to master digital financial processes such as financial robot oper-

ation and electronic invoice management; “Project Management of Business and Finance Integration” is based on real enterprise projects, allowing students to comprehensively use what they have learned in the previous courses to complete the whole process of practice from project establishment, financial and tax scheme design to risk assessment.

4.2. Optimize the Practical Teaching System

School-enterprise cooperation to build a training base for the integration of industry and finance is the core path to optimizing the practical teaching system. In terms of cooperation mode, the “co-construction and co-management” model can be adopted, in which universities and enterprises jointly invest funds, equipment, and teachers to jointly formulate training base construction plans and talent training programs. For example, colleges and universities provide venues and basic teaching facilities, and enterprises introduce advanced financial and tax management systems and real business data, and the two sides jointly set up a training base management committee to be responsible for training course design, teaching quality supervision, etc., and the functional positioning of the training base needs to be closely focused on the needs of talent training for the integration of industry and finance. At the same time, through regular school-enterprise finance and taxation forums, industry skills competitions and other activities, the influence and vitality of the training base will be enhanced, and a platform will be built for students to communicate with industry experts and display practical results. It can also introduce a financial shared service center and an intelligent finance and taxation platform to provide students with highly simulated digital finance and taxation practice scenarios. For example, by introducing the financial sharing system of a large enterprise, students can operate the entire process from the submission of reimbursement applications by employees to the automatic review of the system and the review of payments by financial personnel, and intuitively experience how the sharing mode can improve financial processing efficiency and reduce operating costs. The intelligent finance and taxation platform focuses on the application of new technologies in the field of finance and taxation. With the introduction of an intelligent financial and taxation platform covering intelligent invoice management, tax risk early warning, financial and tax data analysis and other functions, students can learn to use artificial intelligence technology to realize automatic invoice identification and verification, use big data algorithms for tax risk prediction and prevention and control, and conduct in-depth mining and analysis of financial and tax data through visualization tools. For example, in the tax declaration process, students use the automatic tax calculation function of the intelligent finance and taxation platform to quickly complete the calculation and declaration of value-added tax, enterprise income tax and other taxes, and at the same time, with the help of the tax risk scanning module of the platform, find potential tax compliance problems and propose solutions. In addition, by connecting with the real electronic tax bureau and financial software interface, the

operation process of students can be seamlessly connected with the actual business of the enterprise, and the digital financial and taxation work ability can be effectively improved. Thirdly, to carry out practical teaching of real projects of enterprises, in terms of project sources, through school-enterprise cooperation agreements, industry-university-research cooperation projects and other channels, to obtain the real financial and tax management needs of enterprises, such as enterprise tax planning scheme design, financial digital transformation planning, business and financial data integration and optimization projects. For example, a manufacturing company entrusts a university to carry out an inventory management process optimization project, and requires students to propose solutions to reduce inventory costs and optimize tax treatment based on fiscal and tax policies and business practices. After the end of the project, the project results defense meeting will be organized, and enterprise representatives and industry experts will be invited to evaluate and accept the project results, and the excellent project results can be directly applied to the enterprise practice, so that students can accumulate practical experience in real projects, improve their ability to solve practical problems, and enhance their employment competitiveness (Tian, 2024).

4.3. Faculty Construction

Constructing a systematic and multi-level training program for teachers' ability to integrate industry and finance is the core measure to improve the teaching level of teachers. In terms of training content, it focuses on three modules: theoretical knowledge update, practical skill improvement, and teaching method innovation. The theoretical knowledge update module focuses on the cutting-edge dynamics of fiscal and taxation policies and the theoretical system of industry-finance integration, and invites policy research experts and well-known scholars from the Ministry of Finance to give special lectures to interpret hot topics such as digital economy tax collection and management, green fiscal and taxation policies, etc.; the practical skill improvement module cooperates with enterprises to set up practical courses such as the operation of financial shared service centers and the application of intelligent financial and taxation platforms, such as organizing teachers to go to the technical training centers of UFIDA, Kingdee and other enterprises to systematically learn skills such as the deployment of financial robots and the use of financial and tax data analysis tools; the teaching method innovation module introduces advanced teaching methods such as case teaching and project-based learning, and guides teachers on how to transform the integration of industry and finance into teaching resources and design project-based teaching tasks through workshops. It can also establish a two-way flow mechanism for school-enterprise teachers, which can effectively promote the deep integration of theory and practice. In terms of the flow of schools to enterprises, a system of temporary training for teachers in enterprises has been formulated, requiring teachers to be stationed in enterprises for at least 1 - 2 months per school year to participate in the implementation of enterprise finance and taxation management and industry-

finance integration projects. For example, teachers are arranged to assist in tax planning, financial digital transformation and other projects in the financial department of enterprises, so that teachers can understand the business processes of enterprises, the pain points of financial and tax management, and accumulate real practical cases and teaching materials. The company will provide temporary teachers with business mentors to provide necessary working conditions and guidance to help teachers quickly integrate into the work scene of the enterprise. Establishing an incentive mechanism for school enterprise collaboration can further enhance feasibility. Enterprises can provide reasonable project compensation, practical resource support, and even establish special reward funds to recognize outstanding teachers who have performed well in cooperation; schools provide legal, financial, and other support to teachers, assisting in handling contract signing, intellectual property ownership, and other issues in cooperation, reducing teachers' cooperation risks, and allowing teachers to actively participate in corporate cooperation in a worry free environment.

Of course, there are some potential implementation difficulties, such as competing for funding from advanced platforms and establishing long-term cooperative relationships with enterprises (Chen, 2022).

5. Conclusion of the Study

The teaching reform of the integration of industry and finance has comprehensively improved the quality of financial and taxation talent training from three levels: knowledge system construction, practical ability training and professional quality shaping. In terms of knowledge system construction, through the integration of financial and business knowledge modules and the development of interdisciplinary course groups, the fragmentation of theoretical knowledge and strict barriers between disciplines in traditional finance and taxation teaching have been broken. Students can not only systematically master the professional knowledge of finance and taxation, but also deeply understand the internal logical relationship between business activities and financial and tax processing, and form a systematic thinking of "integration of industry and finance". For example, in the interdisciplinary course group learning, students learn to combine customer demand analysis in marketing, cost control strategies in supply chain management, financial and tax accounting, and tax planning by participating in enterprise whole business process simulation projects, and this knowledge integration ability enables them to propose more comprehensive and forward-looking solutions when facing complex financial and tax problems of enterprises.

In terms of practical ability training, the optimization of the practical teaching system and the innovation of teaching methods have created rich practical opportunities for students. The training base for the integration of industry and finance, the introduction of the intelligent finance and taxation platform, and the practical teaching of real projects of enterprises allow students to get in touch with digital finance and taxation work scenarios and actual business needs in a highly simu-

lated enterprise environment. Students operate the financial shared service center system to process expense reimbursement, accounts receivable and payable, etc., and use the intelligent finance and taxation platform to complete tax risk early warning and financial and tax data analysis, effectively improving their digital financial and tax operation skills and ability to solve practical problems. At the same time, innovative teaching methods such as case teaching and project-based learning can be used to cultivate students' independent learning, teamwork and communication skills, and these professional qualities can be improved to make students more competitive in the job market.

In addition, by directly matching the developed skills with specific and in-demand professional roles such as financial data analysts or tax technology experts, the precise alignment between teaching reform and market demand has been further strengthened. This targeted skill transformation path allows students to clearly grasp the matching degree between their own abilities and the target profession during the learning process. For example, for the position of financial data analyst, the financial and tax data analysis methods and intelligent platform operation skills mastered by students in the business finance integration course can be directly applied to the mining, modeling, and decision support of enterprise financial data; as for the role of tax technology experts, their ability to interpret tax policies and experience in digital tax risk prevention and control formed through interdisciplinary learning can quickly adapt to practical work scenarios such as intelligent tax system operation and tax compliance auditing. The direct correlation between these skills and professional roles not only shortens the adaptation period for students from campus to the workplace, but also enables talent cultivation results to respond in real time to the urgent needs of the industry for specialized and composite financial and tax talents. This not only improves the quality of students' employment, but also provides more targeted intellectual support for industrial upgrading.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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