

Construction of A Path for Matching and Improving The Supply and Demand of Financial Technology Talents from The Perspective of Industry-to-Edal Education Integration

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Abstract

The continuous development of the digital economy has promoted the financial industry to accelerate the transformation to digitalisation and intelligence. Artificial intelligence, big data, blockchain, cloud computing and other technologies are constantly integrated into payment, credit, investment, risk control and other business scenarios. The demand of financial institutions for composite talents with financial knowledge and digital technology capabilities continues to expand. Big. The traditional talent training model has obvious disadvantages, and there is a structural deviation between the supply of financial technology talents and job demand. The integration of industry and education can use the resource linkage between universities and financial technology enterprises to convey industrial needs to the talent training link, and promote the connection between the curriculum system, practical teaching and evaluation mechanism and job ability requirements. Based on this, the article analyses the actual requirements and impact mechanism of the supply and demand matching of financial technology talents from the perspective of industry-education integration, and puts forward an optimisation path around the training goals, curriculum system, practical education and collaborative platform, thereby improving the quality of financial technology talent training and providing talent support for the digital transformation of the financial industry.

Keywords

Integration of industry and education; financial technology; talent cultivation; supply and demand matching; school-enterprise cooperation.

1. Introduction

Digital technology is changing the business model, organisational form and job structure of the financial industry. The ability requirements of financial institutions for talents have gradually extended from single financial business knowledge to data analysis, intelligent technology application, digital risk management and other fields. In recent years, economic globalization has continuously promoted the development of foreign trade and foreign investment[1-2]. Additionally, the development of a digital economy has been conducive to solving many structural contradictions in economic development. The rapid change in talent market demand has made the traditional professional training model of colleges and universities face new adaptation pressure. Some finance majors in colleges and universities still focus on theoretical knowledge teaching. The depth of enterprises' participation in talent training is limited, and students do not have enough opportunities to experience real business scenarios, resulting in a certain distance between the results of talent training and the job needs of enterprises. The integration of industry and education emphasises the connection between the education chain, talent chain and industrial chain, which provides new ideas to solve the misalignment of supply and demand of financial technology talents. Integrating the job requirements, technological

development trends and business practises of enterprises into the talent training process of colleges and universities is conducive to promoting talent training from a relatively closed teaching system to an open and collaborative model. Therefore, it is of practical significance to explore the supply and demand matching mechanism and promotion path of financial technology talents under the background of the integration of industry and education to improve the targeting of talent training and enhance students' employment adaptability.

2. The Actual Requirements for Matching The Supply and Demand of Financial Technology Talents from The Perspective of Industry-turing Integration

2.1. The evolution of industrial technology promotes the dynamic adjustment of talent training content

The financial technology industry is characterised by the rapid speed of technology update and the continuous expansion of business application scenarios. Artificial intelligence, big data, cloud computing and other technologies continue to be integrated into financial business such as payment, credit, investment and risk management[3]. The content of talent training in colleges and universities also needs to be dynamically adjusted according to industrial changes. If the relatively fixed professional knowledge framework is used for a long time, the content of students' learning is likely to be far from the actual technical environment of the enterprise. As shown in Table 1, the content of financial technology talent training needs to be adjusted around technology update, knowledge expansion, job docking and school-enterprise coordination. Specifically, colleges and universities should add data processing, financial modelling, intelligent risk control and other teaching contents on the basis of traditional financial theory to guide students to form an ability structure that integrates financial knowledge and digital technology. Enterprises can feedback the application of new technologies, new business models and job ability requirements to colleges and universities to provide a practical basis for curriculum content update; colleges and universities can transform industrial needs into systematic teaching content through professional construction, curriculum development and teaching implementation. By establishing a dynamic adjustment mechanism for the content of talent training, the time difference between education and teaching and industrial development can be shortened, and the adaptability of financial technology talent supply to the technological evolution of the industry can be improved.

Table 1. Dynamic adjustment of talent training content

Adjustment Dimensions	Main Content
Technology Update	Integrate new technologies such as artificial intelligence, big data and cloud computing.
Knowledge Expansion	Add contents including data processing, financial modeling and intelligent risk control.
Post Alignment	Timely update curriculum contents in response to changes in enterprise job requirements.
University-Enterprise Collaboration	Enterprises feed back industrial demands, and universities optimize the teaching system.

2.2. Changes in job ability require the need to strengthen the cultivation of composite talents

Financial technology positions have shown obvious cross-integration characteristics, the connection between financial business and digital technology is constantly strengthening, and the evaluation of talents by enterprises has gradually shifted from a single knowledge mastery to a comprehensive ability survey. While the digital economy drives economic growth, it also leads to a widening of the income gap through efficiency reform caused by various factors, such as restructuring and upgrading, the industrial intelligence, the digital governance model. Financial technology talents not only need to understand the logic of financial business operation, but also have the ability of data analysis, technology application and risk identification, and also need to form a certain communication, cooperation and problem-solving ability[4-5]. This job change requires colleges and universities to break through the relatively independent training mode between finance, computer, statistics and other majors, and reorganise the knowledge content according to the specific position. Course teaching can set up ability modules around real work tasks to guide students to understand how technology serves financial business. The participation of enterprise tutors in teaching can help students understand the workflow and ability standards of different positions, and make talent cultivation closer to the actual employment environment. The formation of a composite ability structure helps to shorten the adaptation cycle of students after entering the workplace from campus, and can also alleviate the problem that financial technology enterprises need to invest more training costs after recruitment.

2.3. The transformation of talent evaluation standards requires the strengthening of practical ability inspection

Judging from the law of talent growth, the job competence of financial science and technology talents cannot be judged entirely through theoretical examinations. Whether students can use digital tools to solve practical financial problems is also an important basis for measuring the quality of training. The traditional evaluation system pays more attention to the course performance and the mastery of theoretical knowledge, and pays insufficient attention to project practice, technology application, teamwork and other abilities. It is easy to form an evaluation tendency of "emphasising knowledge and light application". Under the background of the integration of industry and education, colleges and universities need to incorporate enterprise job standards into the talent evaluation system, and observe the comprehensive quality of students through project results, practical performance, technology application ability and other dimensions. Enterprises can participate in the formulation of evaluation indicators and use actual business tasks to test students' problem analysis and problem-solving ability. The school can establish an assessment method that combines process evaluation and result evaluation, so that students can get continuous feedback in the process of completing projects, participating in practical training and enterprise practice. Changes in evaluation standards can further reversely promote the adjustment of teaching content, so that a more stable connection between talent training, job requirements and employment evaluation can be formed.

3. The Influence Mechanism of Matching The Supply and Demand of Financial Technology Talents from The Perspective of The Integration of Industry and Education

3.1. Industrial demand transmission affects the positioning of talent training

Changes in industrial demand will continue to affect the positioning of financial technology talent training. The adjustment of the job structure of enterprises can be fed back to the

professional construction and training plan of colleges and universities through the industry-educating integration mechanism. The practice of Bank of Communications is representative to a certain extent. The proportion of financial technology professional background talents recruited by it has increased from 32% in 2019 to 55% in 2021, reflecting the continuous expansion of the demand for financial technology talents in the digital transformation of banks. As shown in Figure 1, it shows the proportion of talents with professional background in financial technology of Bank of Communications in 2021. This change shows that the talent training in colleges and universities needs to pay more attention to the ability requirements of data analysis, intelligent risk control, financial product research and development and other positions. Enterprises can feedback talent needs to colleges and universities through recruitment standards, job descriptions and business cases. Schools can adjust their professional positioning and training goals accordingly, and transform industrial job requirements into knowledge, ability and quality training indicators[6]. The integration of industry and education thus forms an effective mechanism for the transmission of industrial demand to education supply, and promotes the transformation of financial technology talent training from traditional discipline-oriented to job demand-oriented.

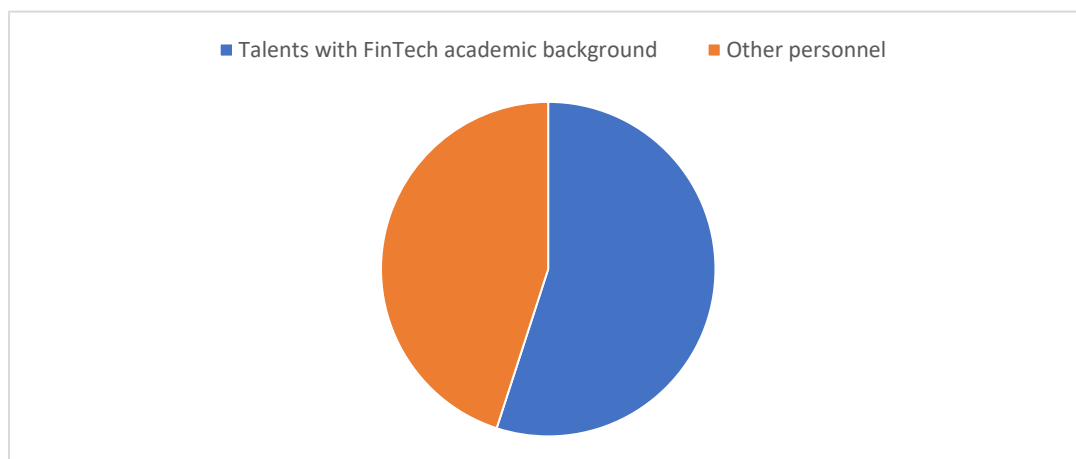


Figure 1. The proportion of financial technology talents in Bank of Communications

3.2. School-enterprise resources coordinate to reshape the talent capacity structure

Resource coordination can change the problem that it is difficult for a single education subject to complete the cultivation of composite talents. Colleges and universities have resources such as teachers, professional courses, scientific research platforms and basic teaching facilities. Enterprises have technical environment, business scenarios, job standards and practical experience. After the two complement each other, they can jointly build financial technology. Talent ability training system. School teachers are responsible for theoretical knowledge combing and teaching design, enterprise technical personnel provide industry technical cases and practical working methods, and students complete knowledge transfer and ability training in specific tasks. Resource collaboration is not only reflected in the sharing of teaching equipment, but also extends to curriculum development, teacher exchange, scientific research cooperation and project training. When different subjects allocate resources around the goal of common talent cultivation, the ability structure of students can change from simple knowledge accumulation to perfect mode[7]. Such ability structure is more in line with the composite trend of financial technology positions, and can also enhance the matching between the supply of talents in colleges and universities and the employment standards of enterprises.

3.3. Embedding practical projects to strengthen the adaptability of talents to positions

Practical projects are the carriers to realise the effective connection between talent cultivation and job requirements. Financial technology enterprises introduce actual business tasks into universities after desensitisation and teaching processing, so that students can understand financial business processes and technology application methods in an environment close to real work. Project tasks can organise scattered knowledge such as data analysis, risk identification, product design, etc., so that students can experience the complete process of problem discovery, program design, technology realisation and result evaluation. Compared with traditional classroom cases, project practice has the characteristics of clear tasks and objectives, specific process requirements and testable results, which is more conducive to cultivating students' ability to solve complex problems. Enterprise tutors participate in project guidance, and can also correct students' deviations in technical application and business judgement in a timely manner, so that students can gradually form a sense of professional norms. As practical projects continue to be embedded in the talent training process, students' understanding of the working environment, job responsibilities and business processes of enterprises continues to deepen, and the distance between the supply of school talents and the job needs of enterprises can also be effectively shortened[8].

4. The Path of Matching and Improving The Supply and Demand of Financial Technology Talents from The Perspective of The Integration of Industry and Education

4.1. Connect with industrial needs to optimise the goal of talent training

The financial technology industry is undergoing continuous changes, and the goal of talent training in colleges and universities needs to be based on the development trend of the industry and changes in job demand. The school can regularly collect the requirements of financial technology enterprises for talent knowledge, skills and literacy by relying on industry enterprise research, employment data analysis, job demand statistics, etc., and incorporate relevant information into the revision process of the professional training plan. The design of training goals should not only describe the need for students to "master financial and technical knowledge", but also further clarify the specific ability requirements of data processing, financial business analysis, intelligent tool use, risk identification, etc. For different employment directions, competency modules with differentiated characteristics can be set up to guide students to choose corresponding courses and practical projects according to their personal development direction. Enterprises can participate in the demonstration of the training plan, put forward opinions on talent specifications and job ability indicators, and improve the industry suitability of the training target. By establishing a regular feedback mechanism for industrial demand, colleges and universities can adjust the positioning of talent training in a timely manner according to the changes in the financial technology industry, so that the supply of education and the talent market can form a more stable interactive relationship.

4.2. Restructure the financial technology curriculum system around job ability

The restructuring of the curriculum system needs to change the way of arranging courses according to the boundaries of traditional disciplines, and take job ability as the basis for organising teaching content. Colleges and universities can sort out the knowledge and skills required for different positions according to financial technology product research and development, data analysis, intelligent risk control, digital operation and other job groups, and then transform them into Basic courses, professional courses, technical courses and

comprehensive practical courses. The course content should strengthen the connection between financial business and digital technology, such as combining financial risk management with data analysis, and combining financial product design with the application of artificial intelligence tools, so that students can complete the application of interdisciplinary knowledge in specific tasks[9]. Enterprises can provide job cases, technical tools and business data samples to provide real materials for the course content. The teaching method can also be extended from knowledge teaching to case teaching, task teaching and project teaching, so that course learning and job tasks can form a corresponding relationship. After the recombination of course modules, students can form a clearer ability growth path and improve the adaptability of talent supply to different financial technology positions.

4.3. Rely on real projects to improve the practical education mechanism of schools and enterprises

The practical education mechanism needs to break through short-term internship and visit-based cooperation, and integrate the real projects of enterprises into the talent training process. The School of Economics and Management of Hunan Institute of Technology relies on the industry-academia research project of the Ministry of Education to build a "Financial Data Modelling and Simulation Laboratory", jointly with enterprises to build an industry-education integration platform, and improve students' practical ability through real project training. According to public data, after the implementation of the reform, the proportion of students who can independently undertake project tasks within 3 months of graduation has increased from 52% to 81%. As shown in Figure 2, the independent commitment rate of students' project tasks has increased from 52% before the reform to 81% after the reform, an increase of 29 percentage points. This change shows that real projects can transform classroom knowledge into job practice ability, so that students can familiarise themselves with enterprises in the process of financial data analysis, model application and project collaboration. Business workflow[10]. Colleges and universities can introduce desensitised enterprise projects, and enterprise tutors provide business needs and technical guidance. School teachers are responsible for process management and teaching evaluation, and integrate project results into curriculum assessment to form a collaborative education mechanism that runs through learning, practice and employment, and further enhance the job adaptability of financial technology talents. Power.

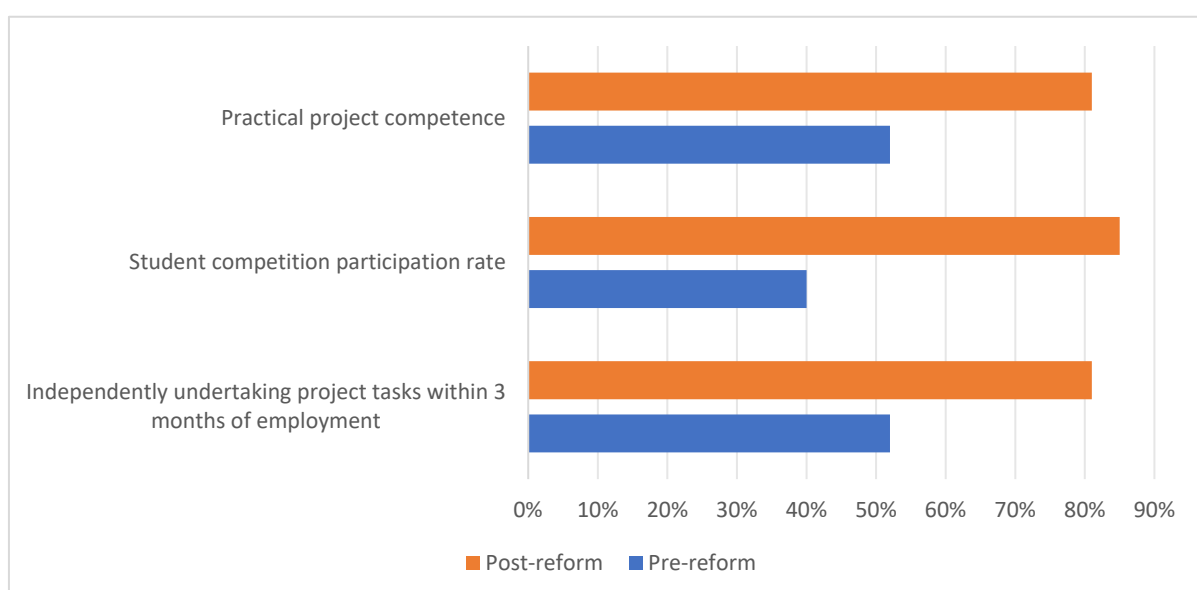


Figure 2. Comparison of job adaptability before and after real project practice

5. Conclusion

In summary, the rapid development of the financial technology industry has made the demand for talents show a trend of composite, technological and practical. The distance between the traditional talent training model and the job demand of enterprises needs to be shortened through the integration mechanism of industry and education. Industrial demand transmission can promote colleges and universities to adjust the positioning of talent training, school-enterprise resource coordination can promote the optimisation of students' ability structure, and real project embedding can enhance students' job adaptability. At the practical level, colleges and universities should optimise the training goals based on industrial needs, improve the curriculum system around job ability, promote practical education by relying on real projects, and strengthen the stability of school-enterprise cooperation through collaborative platforms. With the deepening of the connection between the education chain and the industrial chain, the cultivation of financial technology talents will shift from a single knowledge supply to a comprehensive cultivation of job-oriented capabilities, providing more suitable talent support for the digital transformation and high-quality development of the financial industry.

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