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THE COLLABORATIVE EDUCATION MECHANISM OF FINANCIAL TECHNOLOGY COURSES FROM THE PERSPECTIVE OF CURRICULUM IDEOLOGY AND POLITICS

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Abstract: Against the backdrop of rapid digital economic development and the in-depth application of financial technology, financial technology courses have become essential compulsory courses for economics and finance majors in universities. While promoting financial innovation, financial technology also brings practical issues such as data security, algorithmic ethics, and financial risks, posing higher demands on talent cultivation in higher education. Systematically integrating the concept of curriculum ideology and politics into the teaching of financial technology courses is an important way to implement the fundamental task of fostering virtue through education. From the perspective of curriculum ideology and politics, this paper, based on the teaching practice of undergraduate financial technology courses (conducting a teaching experiment with 80 students from 2 classes during the 2024-2025 academic year) and employing literature research, case analysis, and teaching experiment methods, analyzes the practical dilemmas in the current process of ideological and political education within financial technology courses. It proposes a "Five-in-One" collaborative education mechanism centered on teaching objectives, content, subjects, methods, and evaluation. The paper also summarizes the practical teaching effects, aiming to provide useful references for the ideological and political construction of financial technology courses in universities.
Keywords: Curriculum ideology and politics; Financial technology; Collaborative education; Innovation in teaching methods; Diversified evaluation system

1 INTRODUCTION

With the deep development of the digital economy, the integration of new-generation information technology and the financial industry continues to deepen. Financial technology has become a crucial force driving innovation and efficiency improvements in the financial system. Technologies such as big data, blockchain, and artificial intelligence are widely applied in areas like payment and settlement, credit risk control, asset management, and financial regulation, profoundly transforming traditional financial operation models. In this context, courses related to financial technology have gradually become a significant component of economics and finance programs in universities. Particularly at the undergraduate level, financial technology courses are commonly established as compulsory courses, tasked with cultivating students' digital financial literacy and technical application capabilities.

However, while promoting financial innovation, financial technology also brings numerous practical problems. On one hand, technology-enabled finance helps improve resource allocation efficiency and reduce transaction costs. On the other hand, issues such as algorithmic discrimination, data misuse, privacy breaches, and cross-border transmission of financial risks are increasingly prominent. The rapid development of financial technology imposes higher requirements on practitioners' professional competence and value judgment. If university teaching in financial technology courses merely emphasizes technical tools and business models while neglecting value guidance and responsibility cultivation, it may lead students to form a cognitive tendency of one-sidedly pursuing technical efficiency, which is detrimental to their holistic development and future career growth.

Under the background of higher education reform in the new era, curriculum ideology and politics, as a significant measure to implement the fundamental task of fostering virtue through education, has become an important direction for university curriculum construction. Curriculum ideology and politics emphasizes that all courses should align in their educational goals. It achieves the coordinated advancement of knowledge impartation, capability cultivation, and value shaping by organically integrating value guidance into specialized course teaching. As a professional course highly relevant to real-world financial practice, the content of financial technology courses inherently contains rich ideological and political elements, such as financial risk prevention, scientific and technological ethics, data security protection, and social responsibility, providing a solid foundation for integrating curriculum ideology and politics.

From existing research, academic focus often centers on teaching reform in financial technology courses or singular pathways for integrating curriculum ideology and politics, lacking systematic construction of a "collaborative education mechanism" [1]. In terms of actual teaching situations, the integration of curriculum ideology and politics into current undergraduate financial technology courses is still in the exploratory stage. In some courses, the integration of ideological and political elements lacks systematic design, often presented in a fragmented or supplementary manner, making it difficult to form stable and effective educational outcomes. Some specialized teachers still have confusion regarding the understanding and practical pathways of curriculum ideology and politics, leading to insufficient depth in

the integration between professional teaching and value guidance. These issues, to some extent, constrain the full realization of the educational function of financial technology courses [2].

Based on this, systematically exploring the collaborative education mechanism of financial technology courses from the perspective of curriculum ideology and politics holds significant theoretical and practical value. On one hand, it helps deepen the understanding of the laws governing the integration of curriculum ideology and politics with specialized courses, enriching research on financial technology course teaching. On the other hand, it also contributes to providing operable practical pathways for teaching reform in compulsory undergraduate financial technology courses. Based on the teaching reality of undergraduate financial technology courses, and focusing on the core requirements of collaborative education under curriculum ideology and politics, this paper analyzes the practical dilemmas existing in the current educational process of financial technology courses. It constructs a "Five-in-One" collaborative education mechanism from the dimensions of teaching objectives, content, subjects, methods, and evaluation, summarizes and reflects on its teaching practice effects, aiming to provide useful references for the ideological and political construction of financial technology courses in universities.

2 THE THEORETICAL FOUNDATION OF COLLABORATIVE EDUCATION IN FINANCIAL TECHNOLOGY COURSES FROM THE PERSPECTIVE OF CURRICULUM IDEOLOGY AND POLITICS

2.1 The Connotation and Core Requirements of the Concept of Curriculum Ideology and Politics

Curriculum ideology and politics is a significant achievement of ideological and political education reform in universities in the new era. Its core lies in breaking down the boundaries between ideological and political courses and specialized courses, integrating value guidance into the entire teaching process of all types of courses, and realizing education through all staff, the whole process, and in all aspects. Unlike traditional "ideological and political courses," which focus on specialized theoretical teaching, curriculum ideology and politics emphasizes that specialized courses, while fulfilling the tasks of knowledge impartation and capability cultivation, proactively undertake the functions of value shaping and ideological guidance, enabling students to form correct values and behavioral norms subtly [3,4].

From the perspective of educational objectives, curriculum ideology and politics requires specialized courses to reflect the orientation of fostering virtue through education in goal setting, coordinating the design of ideological and political education objectives with professional training objectives to avoid the tendency of "emphasizing knowledge over education." At the level of teaching implementation, curriculum ideology and politics is not simply about adding ideological and political content. Rather, it emphasizes the natural integration of ideological and political elements into the course knowledge system. Through the selection of teaching content, innovation in teaching methods, and reform of teaching evaluation, it achieves the organic unity of value guidance and professional teaching.

For financial technology courses, whose content is directly related to financial operating mechanisms and socio-economic development, the integration of the concept of curriculum ideology and politics is not only a policy requirement but also an inevitable choice due to the course's intrinsic attributes. Through curriculum ideology and politics construction, students can be guided to correctly understand the relationship between financial innovation and risk prevention while learning professional knowledge of financial technology, enhancing their sense of social responsibility and professional ethics.

2.2 The Basic Connotation of Collaborative Education Theory

Collaborative education refers to an educational philosophy that, in the process of talent cultivation, integrates various educational resources and elements to achieve coordination and cooperation among different educational subjects and stages, thereby forming a systematic and holistic educational pattern. Collaborative education emphasizes the multi-participation of educational subjects and the holistic design of the educational process, aiming to overcome the limited effectiveness of single educational methods [5].

In university course teaching, collaborative education is reflected not only in coordination among courses but also in coordination among different elements within a course, including teaching objectives, content, methods, and evaluation. Through collaborative education, issues such as dispersed objectives, fragmented content, and imbalanced evaluation in the teaching process can be avoided, improving the overall effectiveness of course education.

From the perspective of curriculum ideology and politics, collaborative education is an important pathway to achieve the deep integration of specialized courses and ideological and political education. Only through collaborative design, where value guidance runs through the entire teaching process, can the subtle educational effect of curriculum ideology and politics be truly realized. Therefore, the concept of collaborative education provides significant theoretical support for implementing curriculum ideology and politics in financial technology courses.

2.3 The Intrinsic Alignment Between Financial Technology Courses and the Concept of Collaborative Education

Financial technology courses possess distinct interdisciplinary and practical characteristics. Their teaching content involves multiple fields such as finance, computer technology, data analysis, and risk management. This cross-disciplinary feature dictates that the courses should not only focus on technological implementation but also need to guide students in understanding the economic logic and social impact behind technology applications. The concept of collaborative education can effectively integrate different teaching elements, promoting the fusion of professional

knowledge and value guidance [6].

Furthermore, financial technology courses are closely linked to real-world financial practices, with teaching cases often derived from actual financial scenarios. While financial technology innovation improves financial efficiency, it may also trigger systemic risks and ethical controversies. These real-world problems provide rich material for integrating curriculum ideology and politics. Through a collaborative education mechanism, organically combining technical teaching, case analysis, and value discussions in financial technology courses helps guide students in forming rational and prudent financial concepts.

From the perspective of talent cultivation objectives, financial technology courses aim to cultivate compound talents who possess both professional technical abilities and good professional ethics and social responsibility. The concept of collaborative education emphasizes the coordinated advancement of multiple objectives, which highly aligns with the talent cultivation goals of financial technology courses. Therefore, from the perspective of curriculum ideology and politics, systematically introducing the concept of collaborative education into the teaching of financial technology courses helps enhance the overall educational quality of the courses, laying a solid theoretical foundation for subsequent teaching practice and mechanism construction.

3 PRACTICAL DILEMMAS IN COLLABORATIVE EDUCATION FOR UNDERGRADUATE FINANCIAL TECHNOLOGY COURSES

Promoting collaborative education in financial technology courses from the perspective of curriculum ideology and politics is an important pathway to enhance the educational quality of undergraduate financial technology courses. However, based on current teaching practices of financial technology courses in universities, collaborative education still faces numerous practical dilemmas in its specific implementation. These issues not only constrain the effective implementation of the concept of curriculum ideology and politics but also affect, to some extent, the full realization of the educational function of financial technology courses.

3.1 Lack of Systematic Integration of Curriculum Ideology and Politics

From the perspective of overall course design, the integration of ideological and political elements in some university financial technology courses remains at a fragmented and supplementary level. For example, in a financial technology course at a finance and economics university, ideological and political elements are only concentrated in a 3-class-hour summary session, lacking systematic integration with the course knowledge system and failing to form an educational thread running through the entire teaching process. This fragmented integration approach easily leads to a separation between ideological and political content and professional teaching, resulting in fragmented value cognition among students and difficulty in forming stable risk and responsibility awareness.

Furthermore, some courses express ideological and political educational objectives rather vaguely in their teaching goal setting, failing to make value guidance specific and operable. This leads to a lack of clear guidance during teaching implementation. The integration of ideological and political elements relies more on individual teacher experience and impromptu performance, lacking unified planning and institutional guarantees, thereby affecting the overall effectiveness of collaborative education.

3.2 The Awareness and Capability of Specialized Teachers in Curriculum Ideology and Politics Need Improvement

Financial technology courses have strong professional and technical characteristics. Instructors often have backgrounds in finance, information technology, or data analysis, and their systematic understanding of the concept of curriculum ideology and politics is relatively insufficient. Research shows that 60% of specialized teachers lack training in methods for integrating ideology and politics. Some teachers have misconceptions about curriculum ideology and politics, believing that ideological and political education is primarily the responsibility of dedicated ideological and political courses, while specialized courses only need to focus on knowledge teaching and skill training. This subjectively weakens the initiative for curriculum ideology and politics.

In specific teaching processes, although some teachers acknowledge the importance of curriculum ideology and politics, they lack methods and experience in how to naturally integrate ideological and political elements into financial technology teaching. Some teachers worry that integrating too much ideological and political content might affect the progress of professional teaching or lead to "preachiness" in the classroom, so they often choose to avoid or only touch upon it superficially in practice. This, to some extent, constrains the effective operation of the collaborative education mechanism in financial technology courses.

3.3 Insufficient Value Guidance Function of Teaching Content and Cases

Case-based teaching is an important method in financial technology courses. However, the value guidance function of existing teaching cases has not been fully realized. On one hand, many cases focus on technical implementation paths and business model analysis, emphasizing technological innovation and efficiency improvement, while discussing financial risks, ethical issues, and social impacts relatively less. For example, a case about robo-advisors in a textbook only introduces algorithm model construction without involving ethical controversies such as algorithmic

discrimination and investor protection. This leads students to focus their attention on technical details when analyzing cases, overlooking the value conflicts and responsibility issues brought about by financial technology development.
On the other hand, some cases are not updated promptly, failing to fully reflect new trends and problems in the field of financial technology, resulting in insufficient real-world relevance in case analysis. In the absence of systematic value guidance, it is difficult for students to form a comprehensive understanding of the normative development and risk prevention of financial technology through case studies, which is not conducive to achieving collaborative education goals.

3.4 The Educational Orientation of the Course Evaluation System Is Not Prominent

Regarding the course evaluation system, the current assessment methods for financial technology courses still mainly rely on final exams and skill tests. While the examination of students' mastery of professional knowledge is relatively sufficient, the evaluation of their value cognition, responsibility awareness, and professional literacy is relatively inadequate. There is a certain disconnection between the content of course evaluation and the objectives of curriculum ideology and politics, making it difficult to fully reflect the actual effectiveness of collaborative education in the course.
Furthermore, some courses do not pay enough attention to the student learning process in their evaluation, neglecting the educational value of classroom participation, case discussions, and practical activities. This result-oriented assessment approach tends to weaken students' value experiences during the learning process, which is not conducive to the deep integration of curriculum ideology and politics with professional teaching.

4 CONSTRUCTION OF THE COLLABORATIVE EDUCATION MECHANISM FOR FINANCIAL TECHNOLOGY COURSES FROM THE PERSPECTIVE OF CURRICULUM IDEOLOGY AND POLITICS

Addressing the practical problems in the collaborative education process of current undergraduate financial technology courses, it is necessary to systematically design course teaching from the perspective of curriculum ideology and politics. Through the coordinated advancement of multiple elements, the deep integration of professional teaching and value guidance can be achieved. Based on the teaching characteristics of financial technology courses, this paper constructs a "Five-in-One" collaborative education mechanism from the aspects of teaching objectives, content, subjects, methods, and evaluation. The specific implementation paths for each mechanism will be elaborated in detail below, providing clear guidance for the subsequent implementation of teaching practices.

4.1 Synergy in Teaching Objectives: Achieving the Unity of Knowledge Goals, Capability Goals, and Value Goals

Teaching objectives are the starting point and end point of course teaching. In traditional financial technology course teaching, objectives mostly focus on the mastery of professional knowledge and the cultivation of technical skills, with insufficient attention to value guidance and educational goals. From the perspective of curriculum ideology and politics, the teaching objectives of financial technology courses should be systematically restructured to incorporate value goals into the overall objective system of the course.
Specifically, in setting teaching objectives, based on the original knowledge and capability goals, the educational function of financial technology courses in guiding students to establish correct financial perspectives, risk perspectives, and responsibility perspectives should be clarified. For example, while cultivating students' mastery of core financial technology and application capabilities, guide them to understand the relationship between financial innovation and regulatory constraints, and enhance compliance awareness and risk prevention awareness. By making value goals specific and operable, collaborative education at the level of teaching objectives is achieved [7,8].

4.2 Synergy in Teaching Content: Systematically Exploring Ideological and Political Elements in Financial Technology Courses

Teaching content is the key carrier for integrating curriculum ideology and politics. The content system of financial technology courses contains rich ideological and political elements. Through systematic organization and organic integration, the coordinated advancement of professional knowledge and value guidance should be achieved.

4.2.1 Big data finance module: data compliance and privacy protection

Teaching Case: Introduce the real case of "a certain internet financial platform illegally collecting sensitive user data such as contact lists and consumption records for targeted marketing and credit approval." First, explain the technical process of big data collection (e.g., API interface calls, web crawler tools), enabling students to master professional methods of data acquisition. Second, analyze the illegality of the platform's actions based on relevant provisions of the "Personal Information Protection Law" and the "Data Security Law" – collecting sensitive data without users' explicit consent violates the "principle of minimum necessity." Finally, organize discussions on "Where is the boundary between data value mining and privacy protection?" and "As financial technology practitioners, how can we adhere to legal bottom lines in technology applications?" Guide students to recognize that technology applications must be premised on laws, regulations, and ethical norms, strengthening their awareness of data compliance.

4.2.2 Blockchain finance module: technological innovation and financial regulation

Teaching Case: Take "virtual currency mining and speculative trading" as an example. First, explain the core features of

blockchain technology—decentralization and immutability—and the technical underlying logic of virtual currencies. Then, based on China's regulatory policies regarding virtual currencies (e.g., the 2021 joint notice issued by multiple departments "On Rectifying Virtual Currency 'Mining' Activities"), analyze the financial risks (such as money laundering, illegal fundraising, investor losses due to severe price fluctuations) and social harms (such as massive energy consumption by mining and disruption of financial order) brought by virtual currency trading. Finally, guide students to think about "Does technological innovation mean it can operate outside regulation?" and "What are the reasonable application scenarios for blockchain technology?" Enable students to understand that financial innovation must occur within a compliant framework, enhancing their cognition of financial order maintenance and risk prevention.

4.2.3 Artificial intelligence finance module: algorithmic fairness and investor protection

Teaching Case: Select the "Algorithmic Discrimination Incident in a Bank's Robo-Advisor" – due to gender and regional biases present in the training data, the algorithm resulted in generally lower recommended investment returns for female users and users in central and western regions compared to male users and users in eastern regions. In teaching, first analyze the algorithm model of the robo-advisor (e.g., collaborative filtering recommendation algorithms, risk preference assessment models), enabling students to grasp the technical implementation principles. Then, by comparing recommendation result data across different groups, analyze the causes of algorithmic discrimination (bias in training data, unreasonable algorithm parameter settings). Finally, organize debates on "Are algorithms neutral?" and "How should financial technology practitioners avoid algorithmic discrimination?" Cultivate students' rational and prudent financial values and strengthen their awareness of investor protection.

By embedding the above specific cases into different teaching modules, the content of curriculum ideology and politics forms intrinsic logical connections with the professional knowledge system, preventing the integration from becoming superficial.

4.3 Synergy in Teaching Subjects: Building a Collaborative Education Pattern with Multi-party Participation

Teaching subjects are an important guarantee for the effective operation of the collaborative education mechanism. In the teaching of financial technology courses, the leading role of specialized teachers should be fully utilized, while integrating educational resources from multiple parties to form a synergy in promoting curriculum ideology and politics.

On one hand, establish a training mechanism combining "industry-university joint training + paired lesson preparation between ideological/political teachers and specialized teachers." Regularly organize specialized teachers to participate in training on financial regulatory policy interpretation and industry ethics norms, enhancing their awareness and ability to integrate ideological and political elements into professional teaching, and guiding teachers to proactively explore value guidance points in teaching design and classroom organization. On the other hand, clarify the responsibilities of participating parties: industry experts participate in case writing and practical guidance, providing real industry scenarios and ethical dilemma materials; ideological/political teachers provide theoretical support and assist in designing value guidance sessions; counselors participate in post-class practical activities to strengthen educational effects. Through the collaborative participation of multiple subjects, the relevance and effectiveness of curriculum ideology and politics are enhanced [9-11].

4.4 Synergy in Teaching Methods: Promoting the Combination of Case-Based Teaching and Discussion-Based Teaching

Regarding teaching methods, the advantages of case-based teaching and discussion-based teaching in integrating curriculum ideology and politics should be fully utilized. By introducing real financial technology cases, guide students to consider their social impact and potential risks while analyzing technology applications, thereby achieving simultaneous advancement in knowledge learning and value judgment [12].

In classroom teaching, a problem-oriented teaching approach can be adopted, setting layered discussion topics around financial technology cases. For example, when analyzing the case of "algorithmic discrimination leading to credit inequity," first guide students to think about "the technical causes of algorithmic discrimination" (professional knowledge level), then delve into discussing "how to avoid algorithmic inequity through technical optimization and institutional constraints" (value judgment level). During the discussion process, teachers naturally integrate value guidance into professional discussions through guiding questions, avoiding simple preaching and improving the acceptance and influence of curriculum ideology and politics.

4.5 Synergy in Teaching Evaluation: Constructing a Diversified Course Evaluation System

Course evaluation is an important link in examining the effectiveness of collaborative education. In the teaching of financial technology courses, the traditional evaluation system should be optimized, organically combining value evaluation with capability evaluation to form a diversified course evaluation system.

In terms of evaluation methods, adopt a combined model of "process evaluation (60%) + summative evaluation (40%)." Process evaluation includes classroom participation (15%), performance in case discussions (20%), and practical reports (25%), focusing on assessing students' sense of responsibility, risk cognition, and teamwork skills. Summative evaluation adopts the form of "professional knowledge test + value judgment essay questions," examining both

professional skills and students' value orientation. In terms of evaluation content, clarify assessment points for value goals such as "sense of responsibility," "compliance literacy," and "ethical judgment," ensuring high alignment between evaluation and the objectives of curriculum ideology and politics. Through synergy in teaching evaluation, the educational orientation of curriculum ideology and politics is strengthened.

5 TEACHING PRACTICE AND EFFECT ANALYSIS OF COLLABORATIVE EDUCATION IN FINANCIAL TECHNOLOGY COURSES

The key to constructing a collaborative education mechanism for financial technology courses from the perspective of curriculum ideology and politics lies in implementing relevant concepts and mechanisms into specific teaching practices. Based on the "Five-in-One" collaborative education mechanism proposed earlier, and combined with the teaching reality of compulsory undergraduate financial technology courses (80 students from 2 classes during the 2024-2025 academic year), systematic adjustments were made to course content, teaching methods, and the evaluation system, and they were implemented during the teaching process.

5.1 Specific Implementation of the Collaborative Education Mechanism in Financial Technology Courses

At the level of overall course design, guided by curriculum ideology and politics, the teaching objectives of the financial technology course were reorganized, treating knowledge impartation, capability cultivation, and value guidance as an organic whole in course teaching. In terms of course content arrangement, centered on the core knowledge modules of financial technology, the teaching content was structurally optimized. Without weakening the depth of professional teaching, ideological and political elements such as financial risk prevention, scientific and technological ethics, and social responsibility were targeted for integration.

In the implementation of classroom teaching, emphasis was placed on the role of case-based teaching. By introducing representative financial technology practice cases such as "a certain platform's data breach incident" and "the algorithmic discrimination controversy in robo-advisors," students were guided to consider the underlying value issues while analyzing technology applications and business models. For example, when teaching content related to robo-advisors, students were guided to discuss algorithmic fairness and investor protection. When teaching financial data analysis content, students were guided to focus on data compliance and privacy protection issues. Through problem guidance and classroom discussions, students achieved deepened value cognition during their participation in teaching activities [13].

In the practical teaching component, practical tasks such as "identification of ethical risks in financial technology" and "compliant product design" were set based on course characteristics, emphasizing standardized operation and risk awareness cultivation. This guided students to combine professional knowledge with value judgment in practice, enhancing the practical effect of curriculum ideology and politics.

5.2 Analysis of Teaching Effects and Student Feedback

From the perspective of teaching effects, the implementation of the collaborative education mechanism has, to some extent, improved the overall teaching quality of the financial technology course. Quantitative data shows that the number of students participating in classroom discussions increased by 40% compared to before. Post-course surveys indicate that 85% of students can accurately identify ethical risks in financial technology, and 78% can clearly explain the dialectical relationship between financial innovation and regulation.

Students generally reflected that the course content is more closely aligned with real-world financial practice, and they have gained a more comprehensive understanding of the social impact and potential risks of financial technology development. Through case discussions and interactive teaching, students' classroom participation and learning enthusiasm have significantly improved. Regarding learning attitudes, students gradually shifted from solely focusing on technology applications to also considering the normative and responsible aspects behind the technology during the course. They formed a more rational understanding of the relationship between financial technology innovation and risk prevention. This change indicates that the collaborative education mechanism played a positive role in guiding students to form correct values.

5.3 Teaching Reflection and Experience Summary

During the teaching practice process, it was also found that the collaborative education mechanism still faces certain challenges in implementation. Regarding synergy in teaching content, the integration tightness between some ideological and political elements and professional knowledge is insufficient. There is a need to further refine case design and enhance intrinsic logical connections. In terms of teaching time allocation, how to balance the depth of professional teaching with value guidance content within limited class hours still requires continuous exploration and optimization. Regarding synergy in teaching subjects, the frequency and depth of industry experts' participation in classroom teaching need improvement, necessitating the establishment of more stable cooperation mechanisms.

Overall, the practice of collaborative education in financial technology courses demonstrates that by systematically designing and continuously optimizing the "Five-in-One" collaborative education mechanism, curriculum ideology and politics content can be effectively integrated without weakening the effect of professional teaching. Relevant

experiences hold certain reference significance for implementing curriculum ideology and politics construction in other specialized courses.

6 RESEARCH CONCLUSIONS AND PROSPECTS

6.1 Research Conclusions

Based on the perspective of Curriculum Ideology and Politics, this paper focuses on the collaborative education mechanism of undergraduate Fintech courses. Through literature research, case analysis and teaching experiments, combined with theoretical combing, dilemma analysis, mechanism construction and practical verification, the following core conclusions are drawn:

Firstly, the integration of curriculum ideology and politics with financial technology courses has inherent necessity. The interdisciplinary and practical characteristics of financial technology, along with real-world issues such as data security and algorithmic ethics faced in industry development, provide a natural carrier for integrating value guidance into professional teaching. Collaborative education theory provides a scientific path for their deep integration, and the two are highly aligned in talent cultivation goals.

Secondly, there are four major practical dilemmas in the current collaborative education of undergraduate financial technology courses: lack of systematic design in integrating curriculum ideology and politics, insufficient awareness and capability of specialized teachers in curriculum ideology and politics, weak value guidance function of teaching content and cases, and lack of prominence in the educational orientation of the course evaluation system. These problems constrain the full realization of the courses' educational function.

Finally, by constructing the "Five-in-One" collaborative education mechanism encompassing "teaching objectives, content, subjects, methods, and evaluation," the aforementioned dilemmas can be effectively addressed. Teaching practice shows that this mechanism can achieve the coordinated advancement of knowledge impartation, capability cultivation, and value shaping. Students' risk cognition, sense of responsibility, and professional literacy in financial technology have significantly improved, achieving dual optimization of course teaching quality and educational effectiveness.

6.2 Research Prospects

Although the collaborative education mechanism constructed in this paper has achieved initial results in teaching practice, there is still room for further improvement and expansion. Future research can be deepened in the following three aspects:

In terms of research scope, expand the sample to over 10 different types of universities (covering comprehensive universities, finance and economics universities, and science and engineering universities), collect 200 teaching cases for comparative analysis, explore the adaptability differences of the collaborative education mechanism under different institutional orientations, and extract more universal implementation pathways.

In terms of mechanism optimization, continuously update the ideological and political element library and teaching case library in conjunction with technological innovations and changes in industry regulation within the financial technology field. Focus on strengthening teaching design for content related to ethical controversies and regulatory challenges brought by new technologies like artificial intelligence and big data. Simultaneously, explore new forms of collaborative education under blended online and offline teaching models, such as using virtual simulation platforms to simulate financial ethical dilemmas, enhancing the timeliness and influence of value guidance.

In terms of the evaluation system, develop three-level evaluation indicators (cognitive level, practical level, literacy level) for value goals such as "sense of responsibility," "compliance literacy," and "ethical judgment," and clarify the quantitative standards for each indicator. Introduce industry and enterprise participation in the evaluation process, constructing a "university-industry-society" multi-party linkage evaluation mechanism to more comprehensively and objectively reflect the actual effectiveness of collaborative education. This would provide more precise improvement bases for the ideological and political construction of financial technology courses.

In the future, with the continuous advancement of curriculum ideology and politics construction and the ongoing development of the financial technology industry, it is necessary to continuously deepen the concept of collaborative education, dynamically optimize the education mechanism, cultivate more compound financial technology talents with both professional competence and a sense of responsibility, providing solid talent support for the healthy development of the digital economy.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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REFERENCES

[1] Cheng Tiejun, Huang Jia. Research on the Practical Teaching Reform of Supply Chain Finance Courses under the Background of Fintech. Logistics Sci-Tech, 2024, 47(15): 167-169. DOI: 10.13714/j.cnki.1002-3100.2024.15.041.
[2] Shi Xinru, Liu Sitong. Research on the Teaching Reform of Financial Engineering Courses under the Guidance of Ideological and Political Education Empowered by Fintech. Time-honored Brand Marketing, 2025(15): 197-199.
[3] Cui Lingjian, Wang Xiaohua. The Essential Connotation and Implementation Path of Curriculum Ideology and Politics. Modern Business Trade Industry, 2024(24): 211-213. DOI: 10.19311/j.cnki.1672-3198.2024.24.070.
[4] Li Jing. Research on the Development of Curriculum Ideology and Politics in Colleges and Universities in the New Era. Liaoning University, 2021. DOI: 10.27209/d.cnki.glniu.2021.000665.
[5] Zhang Wei, Lin Yongchun, Xu Peiyun. Research on the Construction of the Integration of Teaching and Scientific Research for Collaborative Education Model in Research Universities from the Perspective of Synergy Theory. Modern Education Management, 2025(11): 48-57. DOI: 10.16697/j.1674-5485.2025.11.005.
[6] Liu Hui, Zhu Haipeng. Integration of Finance, Fintech and Ethical Education under the OBE Concept—Taking the Curriculum Design of Internet Finance as an Example. Modern Business Trade Industry, 2025(21): 161-164. DOI: 10.19311/j.cnki.1672-3198.2025.21.050.
[7] Yue Zihuan, Lü Chengzhang, Yu Xiaoyuan, et al. Research on the Teaching Practice of AIGC Empowering Fintech Courses under the Digital Intelligence Background. Guangdong Economy, 2024(16): 89-91.
[8] Zhang Jing. Teaching Innovation of New Economics and Management Courses in Fintech Empowered by Artificial Intelligence. China Science & Technology Investment, 2024(24): 10-12.
[9] Tong Wenyin. Research on the Construction of the "Five-in-One" Three-Dimensional Classroom for Ideological and Political Courses in Colleges and Universities—Taking Nanchang Business College of Jiangxi Agricultural University as an Example. The Road to Success, 2023(35): 37-40.
[10] Jin Weijia. Exploration on the Construction of a Diversified Collaborative Practical Education Mechanism in Higher Vocational Colleges from the Perspective of Curriculum Ideology and Politics—Taking the Fintech Application Major as an Example. The Road to Success, 2023(31): 5-8.
[11] Meng Defeng, Zhu Hongyu. Research on the Optimization Path of Curriculum Ideology and Politics in "Finance" under the Background of Fintech. Journal of Financial Education Research, 2022, 35(02): 68-73.
[12] Yang Xin. Research on the Reform of Financial Standards Curriculum System under the Background of Sustainable Development—Taking "Fintech" and "Socially Responsible Investment" as Examples. Popular Standardization, 2021(24): 110-112.
[13] Yan Yan. Research on the "Five-in-One" Education Mechanism of Ideological and Political Education in Colleges and Universities. Journal of Heilongjiang College of Education, 2019, 38(02): 108-110.