Exploration and Practice of the Experimental Training System in Finance Courses in the Era of Digital Intelligence

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Abstract. The restructuring of the experimental teaching system in finance courses is a significant embodiment of the deep integration between the finance discipline and artificial intelligence technologies. It serves as a breakthrough for universities to enhance the quality of finance talent cultivation. This paper comprehensively analyzes the new requirements and shortcomings faced by experimental teaching in finance courses in the era of digital intelligence. On this basis, and grounded in the Outcome-Based Education (OBE) theory, it explores an experimental teaching system targeting "new scenarios, new models, and new formats" in education. The study designs a novel reform framework for the experimental teaching of finance courses, addressing elements such as the experimental teaching system, teaching models, curriculum content, teaching strategies, faculty development, and evaluation mechanisms. This framework can provide insights and references for the reform exploration of experimental teaching systems in finance courses at other universities.

Keywords: Digital Intelligence Era; Financial Technology; Experimental Teaching; System Innovation

1 Introduction

As artificial intelligence, blockchain, cloud computing, and big data technologies sweep across the globe, driving knowledge innovation and technological revolution across various industries, digital intelligence technologies are reshaping the entire financial sector. This transformation has led modern financial institutions to increasingly demand finance professionals with a multidisciplinary knowledge structure and practical application skills. How to cultivate finance professionals who can meet market demands and satisfy the practical requirements of modern financial institutions is a pressing issue in the digital age. Financial laboratory courses can effectively simulate innovative financial business scenarios, playing a crucial role in bridging theoretical knowledge from academia with practical skills from the industry, and fostering students' scientific thinking and innovative abilities. Restructuring the experimental training curriculum system in line with fintech development trends and vigor-

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ously promoting innovative reforms and practices in financial laboratory teaching is not only necessary for the development of finance programs in higher education but also a key to enhancing the comprehensive quality and competitiveness of finance students and achieving breakthroughs in cultivating new, application-oriented, multi-disciplinary finance professionals.

The article explores the experimental and practical teaching of finance-related courses in the era of digital intelligence across six aspects: reconstruction of the teaching system, reshaping of the teaching model, redevelopment of the curriculum content, restructuring of teaching strategies, reorganization of the faculty team, and innovation of evaluation mechanisms. The aim is to promote the comprehensive development of students' innovative thinking and practical skills, thereby enabling them to better adapt to the complex and ever-changing financial environment of the future.

2 Current State of Experimental Teaching in Finance Courses

In the era of digital intelligence, the financial industry is confronted with rapidly developing technological changes and increasingly complex market environments. The traditional financial education model can no longer meet the demand for high-quality, multidisciplinary talent in the industry. Therefore, the experimental and practical training systems of finance programs need to integrate advanced technologies such as big data and artificial intelligence to enhance students' data analysis and hands-on skills, thereby cultivating professionals with innovative awareness and practical abilities. This research direction not only addresses the urgent needs posed by transformations in the financial industry but also offers new ideas for promoting reforms in higher education teaching, making it a focal point of academic interest.

In exploring the pathways for constructing the experimental and practical training systems in universities, Zhang Yun et al. (2020) conducted an in-depth analysis from multiple perspectives, including content systems, teaching strategies, faculty teams, and evaluation and assurance mechanisms [1]. Guo Yihui et al. (2024) proposed specific paths for building a practice teaching system, such as developing a virtual simulation experiment platform for financial information engineering, promoting the integration of science and education, deepening the integration of industry and education, and creating new courses on financial big data tools [2]. Chen Feng (2024) suggested advancing experimental teaching reforms through a series of measures, such as adjusting the proportion of experimental courses, enhancing teachers' information literacy, and developing experimental content more closely aligned with the finance industry [3]. Niu Hongjun et al. (2022) achieved deep integration of disciplines, teaching and research, subject competitions, innovation and entrepreneurship projects, and professional skill training through the construction of an "integrated platform for digital cloud teaching and training in economics and management" [4]. Huang Lu et al. (2020) focused on the reform of experimental courses in the financial engineering program, discussing aspects such as reconstructing the experimental course system, innovating experimental teaching technologies and methods, and reforming experi-

mental teaching modes, with the aim of introducing more advanced experimental teaching methods in financial engineering education [5].

Integrating these studies, it is evident that in the construction of experimental and practical training systems in university finance programs, various research efforts emphasize updating course content, enhancing teaching technologies, improving faculty capabilities, and establishing effective evaluation mechanisms as means to comprehensively enhance students' practical skills and employment competitiveness.

2.1 New Requirements for Experimental Teaching in Finance Courses in the Era of Digital Intelligence

The deep application of digital intelligence technologies (such as artificial intelligence, big data, cloud computing, the Internet of Things, and blockchain) in the financial industry has given rise to new scenarios, new models, and new paradigms in financial course teaching, collectively referred to as the "three news." This evolution necessitates the reconstruction of the financial curriculum system, significantly impacting and transforming traditional teaching methods, especially experimental teaching. Specifically, the experimental teaching of finance courses faces three key requirements:

Firstly, there is a need to innovate the experimental teaching model. In the era of digital intelligence, the core of talent cultivation lies in leveraging these technologies to enhance students' innovative thinking and practical abilities, enabling them to understand and apply new knowledge and technologies in the development of the financial industry. The experimental teaching systems and methods of traditional finance courses only support the realization of theoretical knowledge points and lack a systematic combination of theory and practice. Therefore, the experimental teaching of finance courses should incorporate diverse teaching resources and adopt hybrid teaching methods, integrating digital intelligence technologies throughout the talent cultivation process to enhance students' comprehensive qualities.

Secondly, there is a need to innovate the experimental teaching system. Disruptive technological innovations and new business models of the digital intelligence era require an education system that matches them, promoting better alignment of financial talent with societal needs and practical challenges. However, traditional experimental teaching exhibits prominent issues of unidirectional knowledge transfer, information silos, and limited communication methods. Thus, the experimental teaching of finance courses needs to break free from traditional constraints and explore modular experimental teaching curricula and dynamically adjustable systems.

Lastly, there is a need to reconstruct the content of experimental teaching. Traditional experimental teaching has minimal integration with digital intelligence technologies, failing to meet the demands of the digital intelligence era. The experimental teaching of finance courses should overcome interdisciplinary integration barriers, utilizing digital intelligence technologies to update teaching content, thereby showcasing contemporary trends in cross-disciplinary integration and convergence. This approach aims to equip students with solid financial theoretical knowledge and pro-

fessional capabilities, along with an active readiness to integrate knowledge and skills from the digital intelligence domain.

2.2 Issues and Shortcomings in the Current Experimental Teaching System for Finance Courses

Experimental teaching serves as a critical method for applying theoretical knowledge to practical operations, playing a crucial role in developing students' understanding, practical application skills, and innovative thinking. Surveys reveal several key issues and shortcomings in the experimental teaching of finance courses in China.

Lack of a Cross-Disciplinary Financial Experiment Course System.

Currently, the experimental course system for finance majors faces significant challenges, particularly in establishing integration with other disciplines. This shortcoming limits students' comprehensive development and innovation capabilities in a multidisciplinary context.

Firstly, the existing course structure remains predominantly oriented towards single disciplines, lacking effective crossover and integration with other fields. The financial industry increasingly demands talents with interdisciplinary thinking and the ability to solve complex problems by integrating knowledge from economics, computer science, data analysis, behavioral psychology, among others. However, experimental courses confined to a single-disciplinary framework struggle to provide this comprehensive support.

Secondly, course content often lacks practical cases and project-based training involving multidisciplinary integration. Without a comprehensive course system, students often fail to experience the practical effects of cross-disciplinary applications during experimental sessions. For instance, there is a shortage of multidisciplinary projects like using big data analysis for market forecasting or applying psychology to understand investor behavior, resulting in a gap between students' learning experiences and cutting-edge industry applications.

Furthermore, the teaching workforce is often not adequately prepared for interdisciplinary instruction. Many instructors have a primary background in finance, with limited understanding of forefront developments in other fields, which hinders the construction and implementation of interdisciplinary courses. To achieve cross-disciplinary integration in the experimental course system, more support is needed in faculty development and allocation of teaching resources.

Absence of a Market-Oriented Dynamic Development Mechanism for Financial Experiment Courses.

The current experimental courses for finance majors also lack a market-oriented dynamic development mechanism. This deficiency results in course content and practical projects struggling to keep pace with the rapid changes and innovative demands of the financial market.

Firstly, course design often lags behind market changes. Due to the absence of timely feedback and adjustment mechanisms, current experimental courses frequently fail to reflect new trends, technologies, and practices in the financial sector. As the market increasingly demands advanced skills from financial practitioners, stagnant course content may result in students' skills becoming misaligned with industry needs.

Secondly, faculty and teaching resources are not adjusted according to market trends. The fast-paced development and technological advancements in the financial market require continuous updating of knowledge by educators, yet systems lacking supportive mechanisms struggle to encourage ongoing professional development and retraining. Meanwhile, teaching resources and tools also need updating based on industry frontiers to provide students with the latest practical experiences.

Lastly, industry-academia collaboration needs strengthening. The lack of a dynamic development mechanism leads to insufficient cooperation between universities and financial institutions, limiting courses' access to real-time market information and practical opportunities. This not only affects students' understanding of the actual financial environment but also restricts their career readiness.

Lack of a Forward-Looking Technology Tracking and Innovation Mechanism in Financial Experimental Courses.

A significant gap in current financial experimental teaching is the absence of a mechanism aimed at tracking and innovating with frontier technologies. This limitation constrains the modernization and practicality of the teaching content and affects students' ability to adapt to rapid industry changes.

Firstly, the technologies and tools used in experimental teaching often lag behind the latest developments in the financial industry. New technologies emerging in financial markets, such as blockchain applications, artificial intelligence algorithms, and high-frequency trading systems, are rapidly transforming the industry landscape. However, experimental courses fail to timely incorporate these cutting-edge technologies, thereby limiting students' opportunities to receive training aligned with industry practices.

Secondly, there are insufficient effective channels for tracking and updating cutting-edge technologies, resulting in experimental teaching struggling to keep up with the times. The lack of such a mechanism means that courses cannot flexibly introduce emerging technologies or methods to validate and demonstrate their utility through practical applications. For example, new algorithms in quantitative investment models or innovative applications in fintech might be inadequately showcased and explored in courses.

Additionally, without a practice-oriented innovation mechanism, the content and methods of experimental teaching are insufficient to stimulate students' innovative thinking. The financial industry urgently needs talents who can not only understand existing technologies but also drive technological innovation. However, experimental courses without an innovation mechanism often focus on standardized, mature technologies, neglecting the cultivation of students' innovative capabilities.

Lack of Diversified Teaching Models in Financial Experimental Courses.

Currently, a single teaching model prevails in the experimental teaching of financial courses, and diversified teaching methods have not been effectively implemented. This limitation restricts the breadth and depth of students' knowledge acquisition and application and affects their ability to adapt flexibly in complex financial environments.

Firstly, traditional experimental teaching models predominantly rely on teacher-led lectures with passive student reception, lacking diverse interactive and participatory formats. In such teaching environments, students often follow fixed experimental steps, limiting their space for autonomous exploration and innovation. In contrast, diversified models can enhance students' proactivity and hands-on abilities by incorporating case studies, simulation training, project-based learning, and other approaches.

Secondly, current teaching models inadequately consider and support students' individual needs and learning styles. Diversified experimental teaching models can offer customized learning paths based on students' varying interests, strengths, and career goals. For example, some students might be interested in programming quantitative finance tools, while others might want to delve into behavioral analysis of financial markets. Providing diverse learning content and paths can better help students realize their potential.

Moreover, the application of technology in experimental teaching has yet to be fully utilized. Technologies such as virtual reality, online experimental platforms, and big data tools can offer richer and more realistic financial scenarios for student practice. However, due to the lack of diversified teaching models, the potential of many technological tools remains underutilized.

3 Exploring Reform Strategies for the Experimental Teaching System of Finance Courses in the Era of Digital Intelligence

In the context of the digital intelligence era, there is an urgent need to redefine and reform the experimental teaching system of finance courses. As digital intelligence technologies rapidly advance, the financial industry is undergoing a profound transformation, imposing new demands on related educational programs. Therefore, it is crucial to explore the reform of the experimental teaching system for finance courses to ensure that it effectively adapts to and reflects the characteristics of the era.

3.1 Positioning the Reform of the Experimental Teaching System for Finance Courses in the Digital Intelligence Era

Firstly, the reform should focus on the organic integration of digital intelligence technologies with financial knowledge. The modern financial industry has transcended traditional financial analysis and operations, increasingly incorporating advanced technologies such as artificial intelligence, big data analytics, blockchain, and machine learning. Consequently, experimental teaching must update course content and

projects to equip students with these crucial technologies, fostering their ability to operate in an intelligent financial environment.

Secondly, reforms should aim to establish a flexible and dynamic teaching platform, enabling course content to seamlessly integrate the latest industry advancements. This can be achieved by introducing real-time data analytics tools, virtual laboratories, and interactive learning platforms that connect abstract financial theories with their practical applications, thereby enhancing students' hands-on abilities and problem-solving skills in complex scenarios.

Additionally, the experimental teaching system needs to emphasize interdisciplinary integration and collaboration. Financial issues often span multiple fields, necessitating course reforms that promote deep integration with related disciplines such as computer science, economics, statistics, and psychology. This multidisciplinary perspective not only broadens students' knowledge bases but also enhances their innovative abilities and adaptability to the market.

Finally, the reform strategies should prioritize cultivating students' innovative and critical thinking. The rapid changes of the digital intelligence era demand that financial professionals possess not only the ability to analyze problems but also the capability to challenge conventions and think creatively. Therefore, experimental teaching should encourage students to explore new financial models and technological applications and propose innovative solutions.

In summary, the reform of the experimental teaching system for finance courses in the era of digital intelligence should be closely aligned with the four main pillars of technological integration, dynamic adaptation, interdisciplinary collaboration, and the cultivation of innovative capabilities. By implementing such reforms, the system will provide a comprehensive and forward-looking learning platform, better supporting students' career development while supplying the financial industry with exceptional talent suited to the demands of the new age.

3.2 Guiding Principles for Reforming the Experimental Teaching System of Finance Courses in the Era of Digital Intelligence (OBE)

In the context of the digital intelligence era, the reform of the experimental teaching system for finance courses should adhere to the guiding principles of Outcome-Based Education (OBE). This approach emphasizes a student-centered focus on learning outcomes and competencies, ensuring that the educational process and curriculum design effectively meet the demands of professional development and cultivate talents with essential skills and innovative thinking.

Firstly, the OBE principles require clearly defined course objectives, concentrating on the expected abilities and outcomes students should achieve upon course completion. The reform of experimental teaching should set specific learning outcomes, including the mastery of theoretical knowledge, technical application skills, critical thinking, and problem-solving abilities. In finance courses, this might involve students being able to independently use big data tools for market analysis or apply artificial intelligence techniques to optimize investment strategies.

Secondly, OBE emphasizes student-centered instructional design. Financial experimental courses should be tailored around future workplace competencies, designing teaching activities and assessment criteria accordingly. Through practice-oriented teaching methods such as case studies, project-based learning, and task-driven experiments, students can continually enhance their skills and judgment through interaction and application.

Moreover, the OBE guiding principles call for the implementation of continuous assessment and feedback mechanisms. Evaluation should not only encompass tests of students' technical capabilities but also consider their performance in teamwork, innovation, and adaptability to new environments. With timely feedback, both teachers and students can collaboratively identify deficiencies in the learning process and adjust learning methods and teaching strategies to achieve desired outcomes.

OBE also stresses the close alignment of education with industry needs. The reform of finance courses must draw on the latest developments in the industry to ensure that experimental teaching content is synchronized with actual financial market trends. For example, by collaborating with financial institutions and incorporating real-time data and case studies, students can gain authentic experiences of the financial industry environment, thereby enhancing their competitiveness in the job market. Figure 1 illustrates the roadmap for the reform of the experimental teaching system under the OBE framework.

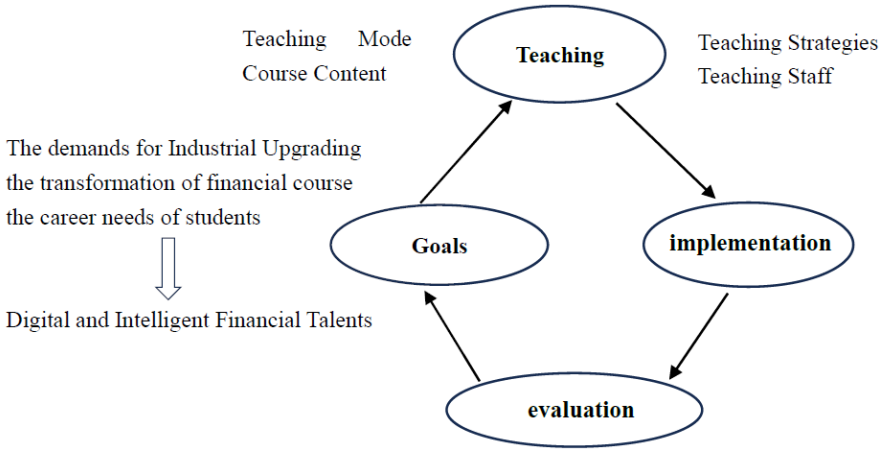

Fig. 1. Roadmap for the Reform of the Experimental Teaching System under the OBE Framework.

In conclusion, in the era of digital intelligence, the reform of the experimental teaching system for finance courses should be conducted within the framework of OBE guiding principles. Through clearly defined outcomes, student-centered pedagogical implementation, dynamic assessment feedback, and close linkage with industry, the reform can more effectively develop professionals who meet the demands of the modern financial market.

4 Practical Reforms of the Experimental Teaching System for Finance Courses in the Era of Digital Intelligence

The reform of the experimental teaching system for finance courses in the digital intelligence era should be guided by adaptation to the "three news" — new scenarios, new models, and new formats. This involves updating the professional knowledge framework, emphasizing the cultivation of students' innovative and practical abilities, and leveraging artificial intelligence technology to implement reforms across six key areas: the teaching system, teaching models, curriculum content, teaching strategies, faculty development, and evaluation mechanisms. These reforms aim to meet the demands of experimental teaching in the digital intelligence era. Figure 2 illustrates a conceptual diagram of the practice of teaching reform in the experimental system of finance courses.

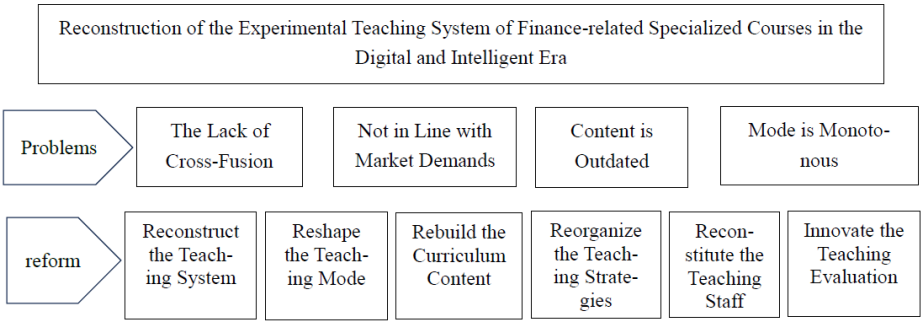

Fig. 2. Conceptual Diagram of Teaching Reform Practices in the Experimental System of Finance Courses.

4.1 Reconstructing a Modular Experimental Teaching System for Finance Courses

Driven by the rapid development of modern financial markets and continuous technological innovation, reconstructing the modular experimental teaching system for finance courses has become a crucial measure for enhancing educational quality and cultivating high-caliber financial talent. This reconstruction process aims to optimize course design through a modular approach, addressing the diverse learning needs of students more flexibly and efficiently, and aiding them in precisely mastering core skills and cutting-edge knowledge in the financial field.

Firstly, a modular teaching system emphasizes the detailed segmentation of course content. The finance discipline encompasses a wide range of knowledge areas, including investment analysis, risk management, financial market operations, and econometrics. By dividing these areas into independent yet interrelated modules, students can select the most suitable module combinations based on their interests and career plans. This approach not only enhances course flexibility but also aids students in achieving personalized learning goals.

Secondly, the system encourages the introduction and integration of interdisciplinary modules, enabling students to acquire a more comprehensive skill set. The practical demands of the financial industry often require a synthesis of diverse knowledge and skills. Modular design can seamlessly integrate content from finance, computer science, statistics, artificial intelligence, and other disciplines. This integration enhances students' abilities to solve complex financial problems and lays the foundation for cultivating versatile talents with cross-disciplinary thinking.

Additionally, a modular teaching system facilitates the innovation of teaching methods and assessment approaches. Each module can employ various teaching methods, such as blended learning that combines online and offline instruction, and project-based practical exercises, encouraging students to acquire knowledge through hands-on activities and collaborative learning. The independent setting of modules allows for targeted assessments, with a continuous feedback mechanism helping students to constantly adjust and improve their learning strategies, thereby enhancing learning outcomes.

Furthermore, the modular system offers the advantage of rapid updating and responsiveness. With the fast-paced changes in financial markets and technological advancements, courses can introduce the latest industry trends and technological developments through the updating and adjustment of independent modules, providing students with knowledge that is ahead of traditional course systems. Consequently, universities can maintain the timeliness and foresight of course content. The framework design for the modular experimental teaching system of finance courses is shown in Table 1.

Table 1. Framework Design of the Modular Experimental Teaching System for Finance Courses.

Experimental Module	Examples of Experimental Courses	Ability Goals	Implementation Means
Financial Knowledge	Securities Simulation, Financial Business Simulation, Financial Planning, Financial Institution Processes	Financial Practice	Virtual Simulation Laboratory
IT Knowledge	Python, Artificial Intelligence, Big Data	Digital Intelligence Literacy	IT Laboratory
Mathematical Knowledge	Econometrics, Statistics	Mathematical Computing Ability	Mathematical Software
Ideological and Political Elements	Economic Law, Financial Regulations	Concept of Legal System	Simulation Software
Comprehensive Category	Digital Economy, Technology Finance	Compound Type	Digital Economy Software

In conclusion, reconstructing the modular experimental teaching system for finance courses is a vital strategic initiative for enhancing educational quality. Through modular design, the curriculum not only achieves high flexibility and diversity but also strengthens alignment with the modern financial industry. This approach provides robust support for cultivating financial professionals with innovative capabilities and practical application skills.

4.2 Reshaping Diversified Experimental Teaching Models for Finance Courses

In the context of continuous innovation and technological advancements in the financial industry, reshaping diversified experimental teaching models for finance courses has become increasingly important. This initiative aims to enhance the adaptability and practicality of courses through diverse approaches, ensuring that students graduate with not only a solid theoretical foundation but also strong practical skills and innovative thinking to meet future challenges in the financial market.

Firstly, diversified teaching models advocate the introduction of various teaching forms and tools, transcending the boundaries of traditional classroom instruction. By adopting blended learning methods that combine online and offline resources, students can explore knowledge in a more flexible learning environment. Additionally, utilizing advanced technologies such as simulation software, virtual reality, and big data analysis platforms can provide students with more realistic and interactive experimental scenarios, helping them better understand and apply the knowledge learned in practice.

Secondly, these models emphasize student-centered instructional design, encouraging personalized and exploratory learning. Unlike uniform teaching schedules and evaluation standards, this approach allows students to select experimental projects and research topics that align with their interests and career goals. Such personalized learning paths not only stimulate students' motivation but also enable them to excel in their areas of expertise.

Moreover, interdisciplinary collaboration and teamwork are essential components of diversified teaching models. In the financial field, solving complex problems often requires the integration of various professional knowledge. Therefore, course design should emphasize cross-disciplinary cooperation through joint projects and team tasks, cultivating students' communication and collaboration skills in multicultural and cross-disciplinary environments. This collaborative learning approach not only broadens students' perspectives but also enhances their decision-making abilities in complex and dynamic settings.

Furthermore, diversified assessment mechanisms are key to reshaping teaching models. In this approach, evaluation goes beyond traditional exam scores to comprehensively consider students' performance in projects, innovation capabilities, and practical skills. Through more comprehensive assessment methods, students can better understand their strengths and weaknesses and make targeted improvements.

In summary, reshaping diversified experimental teaching models for finance courses aims to create a flexible, interactive, and personalized learning environment.

By integrating various teaching forms and tools, personalized learning paths, interdisciplinary collaboration, and diversified assessments, courses can cultivate talents who meet the demands of the modern financial industry while encouraging students to innovate and explore, preparing them for the challenges of their future careers.

4.3 Rebuilding the Curriculum Content of the Experimental System for Finance Courses

Amidst the rapidly changing financial environment and continuous technological innovations, the curriculum content of the experimental system for finance courses needs comprehensive rebuilding to reflect the latest industry developments and meet students' learning needs. This process involves a holistic update from course design and content selection to implementation strategies, providing students with a modern and practical learning platform.

Firstly, rebuilding the curriculum content requires effectively integrating cutting-edge financial technologies and theories into experimental teaching. With the rise of big data, artificial intelligence, blockchain, and fintech, the operation of financial markets is undergoing significant changes. The course system must be updated promptly by introducing experimental projects related to these emerging technologies, helping students master data-driven financial tools and methods, thereby enhancing their competitiveness in the future job market.

Secondly, the curriculum content should emphasize practical and applied design. Experimental teaching should offer more projects based on real cases and data, allowing students to conduct analysis and make decisions in simulated real market environments. For instance, through courses like financial market simulation trading, risk management training, and portfolio optimization, students can gain a more intuitive understanding of the practical applications of financial theories.

Additionally, interdisciplinary integration is a crucial direction for rebuilding curriculum content. Financial decision-making often requires a multidisciplinary perspective, so experimental courses should be expanded to cover knowledge from related fields such as statistics, computer science, and economics. By designing interdisciplinary joint experimental projects, students can develop the ability to think from multiple angles, enhancing their innovative thinking and comprehensive analytical skills.

Moreover, rebuilding curriculum content should focus on cultivating students' soft skills. The modern financial industry increasingly values communication skills, teamwork, and critical thinking. Therefore, the curriculum should incorporate the development of these skills through group projects, discussion topics, and presentation reports, enhancing students' non-technical abilities in real work scenarios.

Finally, the curriculum content rebuilding should maintain dynamic updates to keep pace with industry trends and technological advancements. Educational institutions need to establish continuous feedback and evaluation mechanisms, regularly reviewing the effectiveness of experimental courses and market changes to ensure that the curriculum content remains highly aligned with the demands of the financial industry.

Overall, rebuilding the curriculum content of the experimental system for finance courses aims to create a timely and practical educational environment. By introducing advanced technologies, strengthening practical applications, fostering interdisciplinary integration, and enhancing soft skills, the curriculum ensures students' comprehensive development and lays a solid foundation for their success in the ever-evolving financial market.

4.4 Restructuring the Experimental Teaching Strategies for Finance Courses

In the context of rapid changes in modern financial markets and technological innovation, restructuring the experimental teaching strategies for finance courses is a necessary measure to enhance educational quality and support students' comprehensive development. This restructuring process aims to create a learning environment that combines theory and practice, with foresight and adaptability, through innovative teaching methods and optimized teaching processes.

Firstly, experimental teaching strategies need to incorporate student-centered teaching concepts. This means that instructional design should focus on students' actual needs and learning experiences, implementing personalized teaching methods. For example, by tailoring instruction to different learning interests and backgrounds, differentiated projects and topics can be designed to allow students to deeply understand complex financial concepts and technological applications at their own pace.

Secondly, the application of interactive learning methods in experimental teaching should be enhanced. In finance courses, introducing teaching methods such as case analysis, simulation exercises, and role-playing allows students to interact and communicate in dynamic environments, enhancing their practical skills. This immersive learning experience not only stimulates students' interest but also helps them apply learned knowledge to solve real-world problems.

Moreover, a diversified assessment mechanism is an important component of restructuring experimental teaching strategies. Beyond traditional exams, courses can include project reports, experimental operations, teamwork performance, and innovation capabilities as multidimensional evaluation standards. Through continuous feedback mechanisms, students can gain a clearer understanding of their strengths and weaknesses and make improvements under guidance.

Additionally, restructuring strategies emphasize interdisciplinary integration and real-world connections. In experimental courses, introducing cross-disciplinary resources and knowledge, such as combining computer programming with financial analysis or applying economic theories for market forecasting, helps students become familiar with the interconnections between different fields. Simultaneously, collaboration with enterprises, industry mentor lectures, and real-world problem-solving projects can enhance students' perception and understanding of the real financial market.

Finally, restructuring teaching strategies requires attention to the transformation and professional development of teachers. Teachers need to become guides and supporters for students, rather than just knowledge transmitters. By continuously learning

and receiving training, they can update their knowledge base and teaching abilities to meet the demands of innovative experimental courses.

In conclusion, restructuring the experimental teaching strategies for finance courses aims to adapt to modern educational needs by creating a flexible, interactive, and practically relevant teaching environment. Through student-centered approaches, diversified learning and assessment, interdisciplinary integration, and teacher transformation, courses not only enhance students' practical skills and innovative thinking but also lay a solid foundation for their long-term development in the financial field.

4.5 Restructuring the Teaching Faculty for Experimental Finance Courses

In light of the rapid development and increasing complexity of the financial industry, restructuring the teaching faculty for experimental finance courses is of paramount importance. This restructuring process involves not only optimizing the composition of teaching personnel but also enhancing the professional capabilities and teaching methods of educators to better cultivate high-quality talent suited to the modern financial environment.

Firstly, restructuring the faculty requires the recruitment of professionals with diverse backgrounds. Financial education is no longer confined to traditional economics or finance; it now encompasses areas such as data science, information technology, law, and international relations. Teachers with interdisciplinary knowledge backgrounds can bring richer perspectives and integrated thinking to experimental courses, helping to foster students' cross-disciplinary analytical skills and innovative thinking.

Secondly, an emphasis on practical experience is crucial in the faculty restructuring process. Modern financial education requires not only theoretical instruction but also practical guidance. Therefore, attracting industry experts and seasoned practitioners with substantial practical experience to join the teaching team can provide students with valuable firsthand market insights, helping them understand the intricacies and challenges of real-world financial operations.

Simultaneously, to enhance the teaching capabilities and professional knowledge of the faculty, schools should actively implement ongoing professional development programs. This includes regular teacher training, seminars on the latest industry trends, and opportunities for academic exchanges both domestically and internationally. Through continuous learning, educators can maintain a leading position in their fields and integrate the latest research findings and practical experiences into experimental teaching.

Additionally, encouraging innovation in teaching methods among the faculty is crucial. By fostering a supportive environment for innovative teaching, educators can explore the use of modern instructional techniques such as blended learning, online resource integration, and interactive classrooms to enhance students' learning experiences and outcomes. A feedback mechanism can also be established, allowing teachers to adjust and improve teaching strategies based on student feedback and suggestions.

Finally, the restructured faculty should strengthen internal collaboration and communication. Building a strong team cooperation culture facilitates sharing and learn-

ing among teachers with different disciplinary backgrounds and experiences. Regular course coordination meetings and collaborative teaching projects can enhance the overall coherence of the curriculum and, through multi-faceted collaboration, increase the collective wisdom of the teaching faculty.

In summary, restructuring the teaching faculty for experimental finance courses aims to create a diverse, practice-oriented, and professionally advancing educational environment. By incorporating diverse backgrounds, emphasizing practical experience, ensuring continuous professional development and teaching innovation, and strengthening internal collaboration, schools can enhance course quality and cultivate finance professionals with a global perspective and practical abilities.

4.6 Innovating the Evaluation Mechanism for Experimental Finance Courses

As financial education advances toward innovation and practice, innovating the evaluation mechanism for experimental finance courses is a vital step in improving teaching quality and student capability development. The purpose of this innovation is to establish a more comprehensive, multidimensional, and dynamic evaluation system that accurately reflects students' learning outcomes and skill development, providing strong support for their career growth in the financial industry.

Firstly, innovating the evaluation mechanism requires moving beyond traditional written exams or final assessments. Traditional evaluations often focus on assessing students' theoretical knowledge, which may not fully measure their practical application abilities and innovative thinking. Therefore, the new evaluation mechanism should incorporate process-based assessments and diversified evaluation forms, including project presentations, case analyses, simulation experiments, and group collaboration tasks. These forms can more authentically reflect students' performance and abilities in solving real-world problems.

Secondly, the evaluation mechanism needs to emphasize the assessment of practical skills and soft skills. Modern financial professionals not only require solid industry knowledge but also excellent communication skills, teamwork spirit, and problem-solving abilities. Therefore, the evaluation standards in experimental courses should explicitly cover these aspects, using activities such as role-playing, plan formulation and implementation, and team discussions, enabling teachers to observe and assess students' performance in practical communication and collaboration scenarios.

Moreover, the innovative evaluation mechanism should incorporate self-assessment and peer assessment. This student-participatory evaluation process not only allows students to have a clearer understanding of their learning progress but also promotes their self-reflection ability and learning initiative. Through self-assessment, students can summarize their learning experiences and identify areas for improvement; through peer assessment, they can learn different perspectives and strategies from their peers' performances, further stimulating their learning motivation.

Additionally, evaluations should be continuous and feedback-oriented. This means conducting not only summative assessments at the end of the course but also formative evaluations and feedback throughout the learning process. This model allows

students to promptly understand their strengths and weaknesses, using feedback to guide them in continually refining learning strategies and gradually enhancing their capabilities. Through a feedback mechanism, teachers can also timely adjust teaching content and methods to better meet students' learning needs.

Finally, the revamped evaluation mechanism should be flexible and adaptive. Each student has different interests, styles, and career goals, so course evaluations should consider individual differences and flexibly adjust evaluation standards to support personalized development. For example, allowing students to select project topics that best showcase their abilities and interests or setting specific evaluation criteria based on their different career directions.

In conclusion, innovating the evaluation mechanism for experimental finance courses is key to building a more scientific, inclusive, and innovation-encouraging learning environment. Through multidimensional assessment formats, emphasis on practical and soft skills, incorporation of self-assessment and peer assessment, continuous feedback, and flexible design, courses can more comprehensively foster students' development and readiness to meet the challenges of the modern financial industry.

5 Conclusion

With the rapid development of digital intelligence technologies, fintech is becoming the "new engine" for high-quality financial growth. Financial laboratory courses serve as a crucial bridge between theory and practice, necessitating timely reforms to adapt to the evolving times.

In summary, the digital age has set new requirements for the experimental teaching of finance courses, revealing numerous issues and shortcomings in the current teaching system. To address these demands and cultivate finance professionals who meet market needs, we have undertaken exploratory reforms and practices in the experimental teaching system of finance-related courses. Table 2 presents a comparison of the experimental teaching in finance-related courses before and after the digital and intelligent restructuring.

Table 2. Comparison of Experimental Teaching in Finance-related Courses Before and After Digital and Intelligent Restructuring.

Item	Before Reconstruction	After Reconstruction	Effectiveness
Experimental Teaching System	Unreasonable teaching design	Modular, interdisciplinary integration, flexibility, specificity, timeliness, foresight	Enhanced foresight and adaptability
Experimental Teaching Model	Single teaching method and tool	Student-centered, interdisciplinary cooperation, teamwork, flexibility, interactivity, personalization	Increased interactivity and personalization

Experimental Course Content	Outdated course content	Dynamic content updates, modernization, practicality	Modern and practical course content
Experimental Teaching Strategy	Inefficient teaching behavior, no feedback in teaching process	Combination of theory and practice, foresight, high adaptability	Improved adaptability and practical application
Experimental Teaching Team	Lack of practical experience, weak knowledge base	Diverse backgrounds, practical experience, practice-oriented	Diverse and practice-oriented teaching team
Experimental Evaluation Mechanism	Limited to written exams, final exams	Flexibility, adaptability, more scientific, inclusive, innovative	More scientific, inclusive, and innovative evaluation methods

It is hoped that through the reform exploration of the experimental teaching system for finance courses, valuable insights and references can be provided for cultivating application-oriented and multidisciplinary talent in China's financial sector. Looking forward, there will be continued attention to the development trends of the financial industry, further refining and optimizing the experimental teaching system, and making greater contributions to the development of financial education.

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The Key Project of Undergraduate Teaching Research at Hankou University in 2024: "Reconstruction and Practice of the Curriculum Content System for Finance-related Majors under the Integration of Digital Intelligence Technology."

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