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Research on Disruptive Teaching Reform of the "Securities Investment" Course in Private Undergraduate Institutions

Yutian Wang[1], Huifang Chen[2,3,4,*]

[1]*Nanfang College Guangzhou, Guangzhou, 510970, China*
[2]*Jinan University, Guangzhou, 510632, China*
[3]*Guangxi Normal University, Guilin, 541004, China*
[4]*Guangdong Lingnan Institute of Technology, Guangzhou, 510663, China*
[*]*Corresponding author: chf@lnedugroup.com*

Abstract: *Under the dual drive of digital transformation in the capital market and the upgrading of demand for new business talents, the "Securities Investment" course in private undergraduate colleges faces structural contradictions such as theoretical and practical disconnection, rigid teaching methods, and a single evaluation system. This article is based on the OBE education concept and the requirements of the "classroom revolution", using literature research, case analysis, and empirical research methods to systematically analyze the current situation and core issues of this course in private undergraduate colleges. It proposes a "five in one" disruptive teaching reform framework: with course content reconstruction as the core, teaching mode innovation as the path, digital technology empowerment as the support, diversified evaluation reform as the guarantee, and investment ethics integration as the soul. Based on the experience of first-class curriculum construction in universities such as Wuchang University of Science and Technology and Mianyang City University, a three-level teaching system of "theory experiment practice" is constructed through practical paths such as simulated training, integration of competition and education, and school enterprise collaboration. Research has shown that disruptive educational reforms can significantly enhance students' investment practical abilities, risk prevention awareness, and value judgment literacy, providing a reference paradigm for the reform of finance courses in private undergraduate colleges.abstract should summarize the contents of the paper and the length should be controlled within 100 to 300 words. It should be set in 10-point font size. The spacing before and after paragraph should be set to 12 points.*

Keywords: *Private undergraduate colleges; Securities Investment Studies; Disruptive educational reform; Applied talents; Integration of competition and education*

1. Introduction

1.1. Research Background

With the implementation of the comprehensive registration system in China's capital market and the rapid development of financial technology, the demand for versatile applied talents in the securities investment field is becoming increasingly urgent. As an important component of higher education, private undergraduate colleges focus on cultivating applied talents, which is highly in line with the talent needs of the securities industry. ”As a core course in majors such as financial engineering, financial management, and business administration, Securities Investment undertakes the important mission of cultivating students' investment analysis ability, risk management awareness, and wealth management literacy. However, most private undergraduate colleges still use traditional teaching methods for this course: textbook content lags behind market practice, teaching methods mainly rely on theoretical lectures, and practical training lacks real-life scenarios to support it, resulting in a widespread phenomenon of students' understanding of theory but not practical operation, and understanding of indicators but not application. The teaching practice of Professor Sun Leilei from Yantai University of Technology shows that the problem of "students brushing short videos and questioning the practicality of theories" in traditional classrooms is prominent, and the attractiveness and teaching effectiveness of the course urgently need to be improved[1-2].

Under the background of the construction of new liberal arts and the "Double Ten Thousand Plan",

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

the construction of first-class undergraduate courses at the national and provincial levels provides direction guidance for curriculum reform. The "Securities Investment" course of private colleges such as Wuchang University of Technology and Mianyang City University has been successfully selected as a first-class undergraduate course through teaching innovation. Its experience shows that only by breaking through the constraints of traditional teaching paradigms and implementing disruptive educational reforms can the quality of the course be improved by leaps and bounds. Therefore, studying the disruptive educational reform path of the "Securities Investment" course in private undergraduate colleges has important theoretical and practical significance for improving the quality of talent cultivation and serving the development of the capital market[3-4].

1.2. Research Significance

Theoretical significance: The "Five in One" disruptive educational reform framework constructed in this article enriches the theoretical system of financial course reform in applied undergraduate colleges, provides a new theoretical perspective for the deep integration of OBE concept and securities investment teaching, and fills the gap in traditional teaching reform research that emphasizes local optimization over system reconstruction.

Practical significance: The specific paths proposed in the research, such as teaching content reconstruction, digital technology empowerment, and diversified evaluation reform, can directly provide operational guidelines for curriculum teaching in private undergraduate colleges. By promoting practical models such as simulated training, integration of competition and education, and collaboration between schools and enterprises, it can help enhance students' practical abilities and employment competitiveness, and provide more "skilled, cultured, and bottom line" composite talents for the securities industry.

1.3. Research Methods and Technical Roadmap

1.3.1. Research methods

(1) Literature research method: Systematically review relevant literature on the reform of securities investment courses, the cultivation of applied talents, and the integration of financial technology and education at home and abroad, laying a theoretical foundation for this study.

(2) Case analysis method: Select first-class course construction cases from universities such as Wuchang University of Science and Technology, Mianyang City University, Yantai University of Technology, etc., deeply analyze their teaching reform measures and effectiveness, and extract replicable experiences.

(3) Empirical research method: Through questionnaire surveys, interviews, and other methods, 200 students, 30 teaching staff, and 15 industry experts from 10 private undergraduate colleges were surveyed to understand the current situation and reform needs of course teaching.

(4) Comparative experimental method: Two classes majoring in Financial Management for the 2023 cohort of a private undergraduate college were selected as experimental subjects. The experimental class adopted a disruptive teaching reform plan, while the control class continued to use traditional teaching methods. The effectiveness of the teaching reform was compared through indicators such as final assessment, competition results, and employment feedback.

1.3.2. Technical roadmap

The technical roadmap of this article is shown in Figure 1:

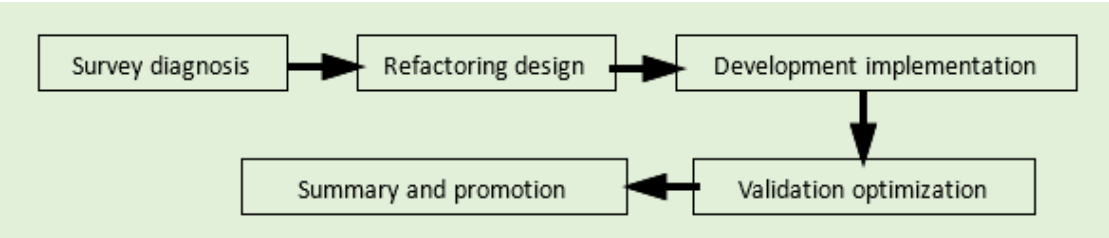


Figure 1 The technical roadmap of this article

Note: the core links in the figure include current situation investigation, problem diagnosis, framework construction, practice verification, effectiveness evaluation and path optimization, forming a closed-loop research process.

The technology roadmap is divided into 6 stages, with a cycle of approximately 1.5-2 years.

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

The closed-loop path of "research diagnosis reconstruction design development implementation verification optimization summary promotion" is adopted, with the core of "subverting traditional classrooms, empowering practice with digital intelligence, and promoting collaborative education between industry and education".

The specific research progress is shown in Table 1.

Table 1 Research Process Table

Stage	Time	Core tasks	Key outputs	Implementation points
1. current situation diagnosis and theoretical foundation	the first to third months	1. current situation diagnosis and theoretical foundation, the first to third months, 1. research on the current situation of securities investment teaching in private undergraduate colleges (teacher-student questionnaire, enterprise interview, peer benchmarking) 2. study on subversive educational reform theory and policy (OBE, new business, digital intelligence education) 3. determine the subversive goals (such as from "knowledge transfer" to "ability and literacy drive")	status analysis report, educational reform theoretical framework, and goal system,	covering 3-5 private undergraduate colleges, interviewing 3-5 securities companies/funds/fintech enterprises, and identifying the pain points (such as theory divorced from practice, assessment form)
2.subversive reconstruction of the curriculum system.	the 4th – 6th month	1. modular content reconstruction (macro policy, digital intelligence analysis, value investment, risk compliance, ideological and political integration) 2. teaching mode design (course competition certificate integration, flipped classroom, project-based learning, virtual simulation) 3. school enterprise collaboration mechanism construction (Introducing enterprises into teaching, ordering classes, practice base).	Modular curriculum outline, teaching model manual, school enterprise cooperation agreement.	Cut out outdated content and add modules such as quantitative investment, AI stock selection and blockchain finance; Embedding the ideological and political elements of "China oriented and rational investment"
3.teaching resources and platform development	the 7th – 9th month	1. digital intelligence teaching resources (online courses, virtual simulation system, case bank, question bank) 2. training platform construction (docking with tonghuashun/Oriental Wealth securities simulated trading and campus financial comprehensive training center) 3. teachers' ability improvement (double teacher training, enterprise temporary post, teaching and research community).	Online courses, virtual simulation platforms, training manuals, teacher training programs.	Joint construction of training platform with securities companies, students simulate stock/futures/options trading, and generate investment analysis report.
4. Teaching implementation and process monitoring	Months 10 – 15	Teaching in pilot classes (2 – 3 classes, compared with traditional classes) 2. implementation of diversified teaching methods (flipped classroom+project type+enterprise tutor in the classroom) 3. process assessment (combination of class and competition, experimental report, portfolio scheme, ideological and political performance).	Teaching log, students' process data, phased effect analysis.	Course competition integration: embedded in the National College Students' financial modeling competition and securities investment simulation competition; Business mentors teach 4 – 6 class hours per semester.
5.Effect verification and iterative optimization	The 16th – 18th months	1. multiple evaluation (student ability assessment, enterprise satisfaction, peer review, performance comparison) 2. collect feedback, optimize course content, teaching methods, and assessment system 3. form a replicable paradigm of teaching reform.	Effect evaluation report, optimized teaching documents and typical case sets.	SPSS is used to analyze the ability difference between the pilot class and the traditional class (such as investment analysis, risk control, professional quality), and the enterprise evaluation weight is ≥ 30%.
6.summary and application	The 19th – 24th months	1. summary of teaching reform achievements (papers, textbooks, teaching cases, policy suggestions) 2. intra school promotion and inter school radiation (open courses, seminars, achievement sharing) 3. application for teaching achievement awards, first-class courses, etc.	Research reports, monographs/textbooks, and application materials for teaching achievement awards.	Form an education reform alliance with 3-5 private undergraduate colleges and output the Standardization Implementation Plan.

2. Teaching Status and Problem Diagnosis of "Securities Investment" Course in Private Undergraduate Colleges

2.1. Research on Teaching Status

In order to fully grasp the teaching status of "securities investment" course in private undergraduate colleges, this study conducted a special survey on 10 private undergraduate colleges (covering Guangdong, Guangxi, Hunan, Hubei, Sichuan, Shandong, Anhui and other provinces). The research objects include 30 teachers (3 professors, 12 associate professors, 15 lecturers), 200 students (equally distributed among sophomores and seniors), and 15 experts in the securities industry (from Dongfang wealth securities, Great Wall Securities and other institutions). The survey results are as follows:

2.1.1. Course orientation and objectives

The survey shows that 80% of colleges and universities position the course as "professional core course", but only 30% of the courses clearly put forward the specific goal of "application-oriented talent training". Most of the course objectives still focus on the teaching of theoretical knowledge, and pay insufficient attention to the cultivation of practical ability, risk awareness, investment ethics and other qualities. According to the feedback of industry experts, graduates generally have the problem of "solid theoretical foundation but weak practical ability and weak risk awareness", which makes it difficult to

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

quickly adapt to the job demand[5-6].

2.1.2. Teaching contents and textbooks

In terms of textbook selection, 60% of colleges and universities use traditional classic textbooks, with theoretical knowledge as the main content, less than 20% of which involve cutting-edge content such as financial technology, ESG investment and quantitative analysis. In terms of teaching content arrangement, 70% of the courses still follow the traditional logic of "theory index analysis", which is out of line with the logic of "market target strategy" in actual investment decision-making. The teaching practice of Yantai Institute of technology found that the chapter of "stock investment analysis" in the textbook was at the end of the semester, which led to students' frustration due to knowledge lag in the simulation training.

2.1.3. Teaching methods and means

In terms of teaching methods, 55% of teachers focus on "theory teaching+case analysis", which is lack of interactivity and practicality; Only 25% of the courses introduced simulation training software, and 15% of the courses carried out school enterprise cooperation teaching. In terms of teaching methods, although 90% of teachers use ppt courseware, less than 10% use digital means such as live broadcast, cloud interaction and AI assisted teaching. Student feedback showed that 68% of the students thought that "the course content was boring and the practice link was insufficient", and 52% of the students said that they were "more willing to learn through simulation operation, competition and other methods"[7].

2.1.4. Training conditions and teachers

In terms of training conditions, 60% of colleges and universities are only equipped with basic simulation trading software (such as Huashun and Dongfang wealth simulation panel), lacking a comprehensive training platform synchronized with the real market; 30% of colleges and universities have not established off campus practice bases, making it difficult for students to access real business scenes. In terms of the teaching staff, 70% of the teachers lack experience in the securities industry, and the proportion of "double qualified" teachers is less than 30%, which is difficult to effectively guide the students' practical training.

2.1.5. Evaluation system and effectiveness

In terms of the evaluation system, 85% of the courses are still based on "final exam+usual score", and 70% of the usual scores are homework and attendance, and the proportion of indicators such as practical operation and innovation achievements is very low. In terms of teaching effectiveness, although the students' passing rate of the final exam reached more than 80%, the proportion of winners in the National College Students' financial challenge and other competitions was less than 5%, and the proportion of graduates engaged in securities related work was only 12%, and the job suitability needs to be improved.

2.2. Core Problem Diagnosis

Based on the survey results, there are five core problems in the teaching of "securities investment" in private undergraduate colleges:

2.2.1. The course orientation is vague and disconnected from the cultivation of applied talents

The course objectives are not fully aligned with the job requirements of the securities industry, and the phenomenon of emphasizing theory over practice and knowledge over literacy is prominent, which makes it difficult to cultivate students' core professional abilities.

2.2.2. The teaching content lags behind and is seriously out of touch with market practice

The teaching material content is not updated in time, the coverage of cutting-edge knowledge and practical skills is insufficient, and the teaching logic is inconsistent with the actual investment decision-making process.

2.2.3. The teaching methods are solidified and lack of interactivity and attraction

Tthe traditional teaching method is dominated, and the application of digital and immersive teaching methods is insufficient, which is difficult to stimulate students' learning initiative.

2.2.4. The training teachers are weak, and the support conditions are insufficient

There is a shortage of "double qualified" teachers, the function of the training platform is single, and the construction of off campus practice base is lagging behind, which can not meet the needs of practical

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

teaching.

2.2.5. The evaluation system is single, which is difficult to fully reflect the teaching effect

The evaluation index focuses on knowledge memory, ignores the ability and quality assessment, and cannot effectively guide students to focus on practice and innovation.

3. The Theoretical Basis and Core Connotation of The Subversive Teaching Reform of "Securities Investment" Course in Private Undergraduate Colleges

3.1. Theoretical Basis

3.1.1. OBE education philosophy

The researchers outcome based education emphasizes "taking students' learning outcomes as the core" and pays attention to cultivating students' comprehensive ability and professional quality. This concept requires that the curriculum reform needs to reverse the design of teaching objectives, content and evaluation system, so as to ensure that teaching activities are highly consistent with talent training objectives, and provide the core guiding ideology for the subversive teaching reform[8-9].

3.1.2. Constructivist learning theory

This theory believes that learning is a process in which students actively construct knowledge, rather than passively accept information. Subversive teaching reform needs to create a real learning situation, and guide students to actively explore knowledge and improve their ability through simulation training, case study, group cooperation and other ways.

3.1.3. Theory of integration of industry and education

The integration of industry and education emphasizes the deep cooperation between education and industry, and realizes the seamless connection between teaching content and job requirements through school enterprise collaborative education, Co Construction of teaching resources, sharing of teacher platform, etc., providing support for the practical reform of the curriculum.

3.1.4. Financial technology empowerment theory

Big data, artificial intelligence, blockchain and other financial technology technologies provide new tools and methods for curriculum reform. Through digital teaching platform, intelligent simulation system, real-time data analysis and other means, the innovation and upgrading of teaching mode can be realized.

3.2. Core Connotation

Subversive teaching reform is not a partial optimization of traditional teaching, but a systematic reform centered on "reconstructing teaching logic and reshaping teaching ecology". Its core connotation includes the following five aspects:

3.2.1. Goal reconstruction

From "knowledge imparting" to "paying equal attention to both ability and quality", the researchers cultivate compound applied talents who "understand theory, practice, resist risks and have ethics", and highlight the patriotism and value orientation of "looking at and doing more in China".

3.2.2. Content reconstruction

The researchers break the chapter boundaries of traditional textbooks, take the actual investment decision-making process as the logical main line, reconstruct the modular content system of "investment tools - market analysis - target selection - timing - strategy formulation - risk prevention and control", and integrate cutting-edge knowledge such as financial technology and ESG investment.

3.2.3. Mode reconstruction

The researchers abandon the traditional mode of "teacher led, classroom centered", build a new teaching mode of "student-centered, practice centered", and integrate multiple teaching methods such as simulation training, competition teaching integration, school enterprise collaboration, online and offline hybrid.

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

3.2.4. Technology reconstruction

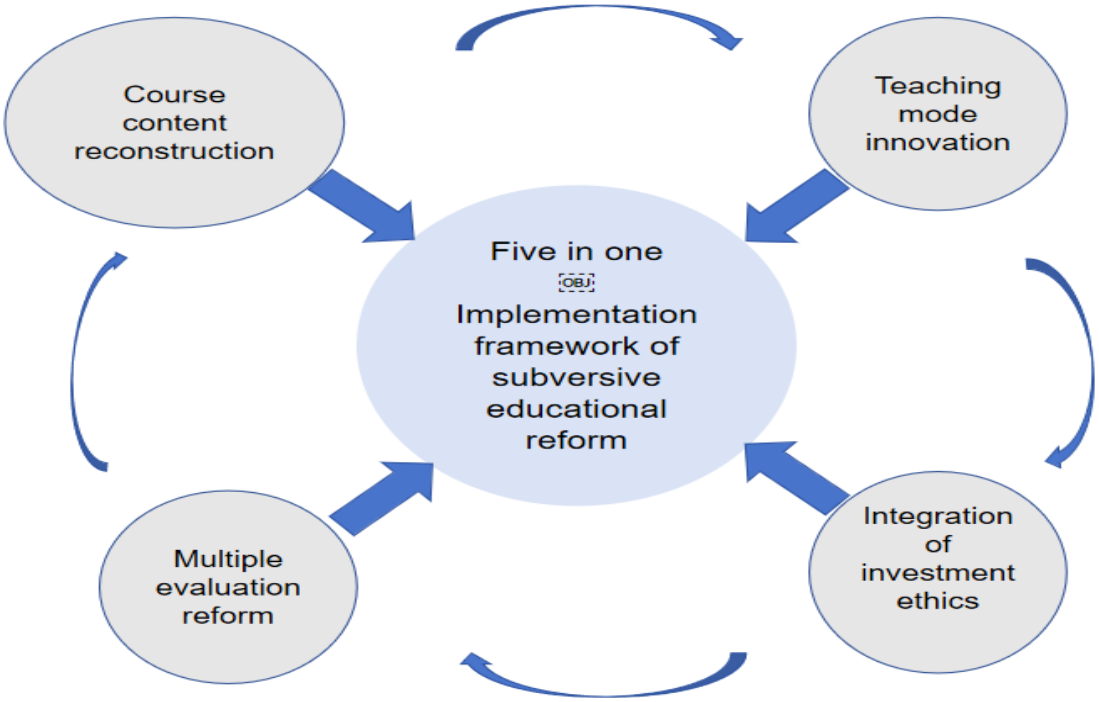
With the support of digital and intelligent technology, the researchers create a smart teaching environment of "virtual reality combination and real-time interaction", and realize the digitization of teaching resources, visualization of teaching process and accuracy of teaching evaluation.

3.2.5. Evaluation reconstruction

The researchers break through the evaluation limitations of "single examination", establish a "knowledge ability literacy" trinity of multiple evaluation system, and highlight the process assessment and practical results orientation.

4. The "Five in One" Implementation Framework of Subversive Teaching Reform of "Securities Investment" Course In Private Undergraduate Colleges

Based on the above theoretical basis and core connotation, this paper constructs a "five in one" subversive educational reform implementation framework (as shown in Figure 2), covering five core dimensions: curriculum content reconstruction, teaching mode innovation, digital technology empowerment, multiple evaluation reform, and investment ethics integration. Each dimension supports and cooperates with each other to realize the systematic reform of curriculum teaching.



Note:The framework takes "application-oriented talent training" as the core goal, and constructs the education reform system from the five dimensions of content, mode, technology, evaluation and quality, forming a closed-loop education mechanism.

Figure 2 Implementation framework of "five in one" disruptive educational reform

4.1 Course Content Reconstruction: Build a Modular System Oriented By Practical Needs

4.1.1. Reconstruction logic

The researchers break the traditional linear logic of "theory index analysis", take the actual investment decision-making process as the core, and reconstruct the content system according to the practical logic of "what is (investment basis) - what to invest (target selection) - how to invest (analysis method) - how to control risk (risk prevention and control) - how to keep the bottom line (investment Ethics)"[10].

4.1.2. Module design

The researchers integrate the course content into six core modules, as shown in Table 2 below:

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

Table 2 Modular design of course content

Module name	Core content	Teaching objectives	Practice carrier
Fundamentals of securities investment	Composition of securities market, classification of investment instruments, regulatory system and macro policy analysis	Master the basic concepts and market rules of securities investment and establish a macro vision	Policy interpretation report and market research analysis
Analysis of investment object	Valuation methods and selection logic of stocks, bonds, funds, derivatives and other objects	Have the ability to judge the value of the target and be able to screen high-quality investment targets	Research Report and valuation model construction of listed companies
Investment analysis method	Fundamental analysis, technical analysis, quantitative analysis, behavioral finance analysis	Proficient in various analysis methods and able to formulate personalized investment strategies	Analysis report writing and strategy simulation
Trading practice skills	Simulated transaction, order type, position management, stop loss and stop gain settings	Master the transaction operation process and improve the practical ability	Simulated trading competition and real offer operation training
Risk prevention and control system	Identification and control of market risk, credit risk and operational risk	Establish risk awareness and formulate risk prevention and control plan	Risk case analysis and stress test drill
Investment ethics and literacy	Compliance trading, honest investment, ESG concept, wealth concept shaping	Stick to the professional bottom line and establish the correct investment ethics	Ethical case debate, ESG investment scheme design

4.1.3. Content update

The researchers establish a content update mechanism of "teaching materials+dynamic resources". The core teaching materials are securities investment practice (such as the model of Yantai Institute of Technology) jointly prepared by colleges and enterprises, which supplement real-time cases and research reports provided by industry institutions such as Oriental Wealth securities and Great Wall Securities, and integrate cutting-edge content such as AI quantitative investment and blockchain applications.

4.2. Innovation of Teaching Mode: Take Students as the Center and Build a Diversified Integration System

4.2.1. "Three-level sequential" teaching mode

The researchers learn from the experience of Mianyang City University to build a "theoretical discussion - Experimental Exploration - practical test" three-level teaching mode. The teaching objectives, methods and carriers of each stage are shown in Table 3 below:

Table 3 Implementation table of "three step sequential" teaching mode

Teaching stage	**Teaching objectives**	**Core teaching methods**	**Teaching carrier**	**Percentage of class hours**
Theoretical discussion stage	Lay a solid theoretical foundation and establish an analytical framework	Case teaching, flipped classroom, cloud interaction	Online self-study resources, industry expert lectures	30%
Experimental exploration stage	Improve practical skills and verify theoretical knowledge	Simulation training, group cooperation, AI assistance	Flush simulation panel and quantitative analysis software	40%
Practical test stage	Strengthen application ability and meet job requirements	Competition teaching integration, school enterprise training, project practice	Financial investment competition and off campus practice base	30%

4.2.2. Implementation of key teaching modes

4.2.2.1. Flipped classroom and case teaching

Before class, students can push theoretical videos and industry cases through online platforms, and learn independently and complete preview tasks; During the class, case discussions and analysis reports of listed companies (such as the model of Wuchang Institute of Technology) are organized, and teachers give comments and guidance to cultivate students' dialectical thinking and analysis ability.

4.2.2.2. Simulated practical training teaching

The researchers introduce simulated trading platforms such as flush and Oriental Fortune, give students 1million virtual principal, carry out simulated investment competition in real time with the A-share market, and include it in the course score according to the rate of return at the end of the semester, so as to stimulate students' enthusiasm for learning. At the same time, quantitative analysis software (such as Python and MATLAB) is used to carry out technical analysis, strategy back testing and other training projects to improve students' financial technology application ability.

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

4.2.2.3. Integrated teaching of competition and education

The researchers integrate the contents of the "Oriental Wealth Cup" National College Students' financial challenge and the "Guoyuan Cup" financial investment innovation competition into teaching, and promote learning and practice through competition. The course team established a competition Guidance Group, carried out special training, encouraged students to participate in competitions at all levels, and improved their practical ability and competitive awareness.

4.2.2.4. School enterprise collaborative teaching

The researchers build an off campus practice base with Dongfang Fortune Securities, Great Wall Securities and other institutions, invite industry experts and senior fund managers to enter the classroom to carry out "cloud interaction" or on-site teaching, and share practical experience; Arrange students to enter enterprises for internship, participate in the auxiliary work of real investment projects, and realize the seamless connection between teaching and posts.

4.3. Digital technology empowerment: build a digital system supported by smart Teaching

4.3.1. Construction of teaching platform

The researchers build an "Online+offline" integrated smart teaching platform and integrate the following functional modules (as shown in Figure 3):

4.3.1.1. Online learning module

The researchers provide theoretical videos, electronic textbooks, case libraries, problem sets and other resources to support autonomous learning, online testing, and interactive Q&A.

4.3.1.2. Simulation training module

The researchers integrate simulation trading system, quantitative analysis tools and real-time market data to realize the whole process of practical training.

4.3.1.3. Interactive communication module

The system support live teaching, cloud interaction, group discussion, teacher-student comments, and break the time and space constraints.

4.3.1.4. Data analysis module

The researchers carry out real-time analysis of students' learning behavior, training results, investment strategies and other data, and accurately push personalized learning suggestions.

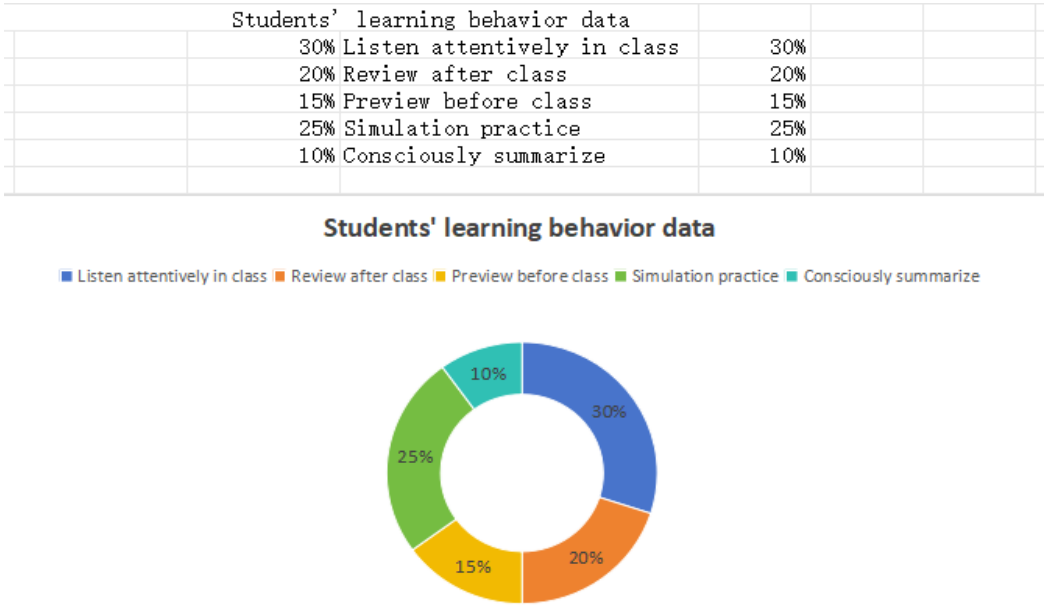


Fig.3 Data distribution map of students' learning behavior

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

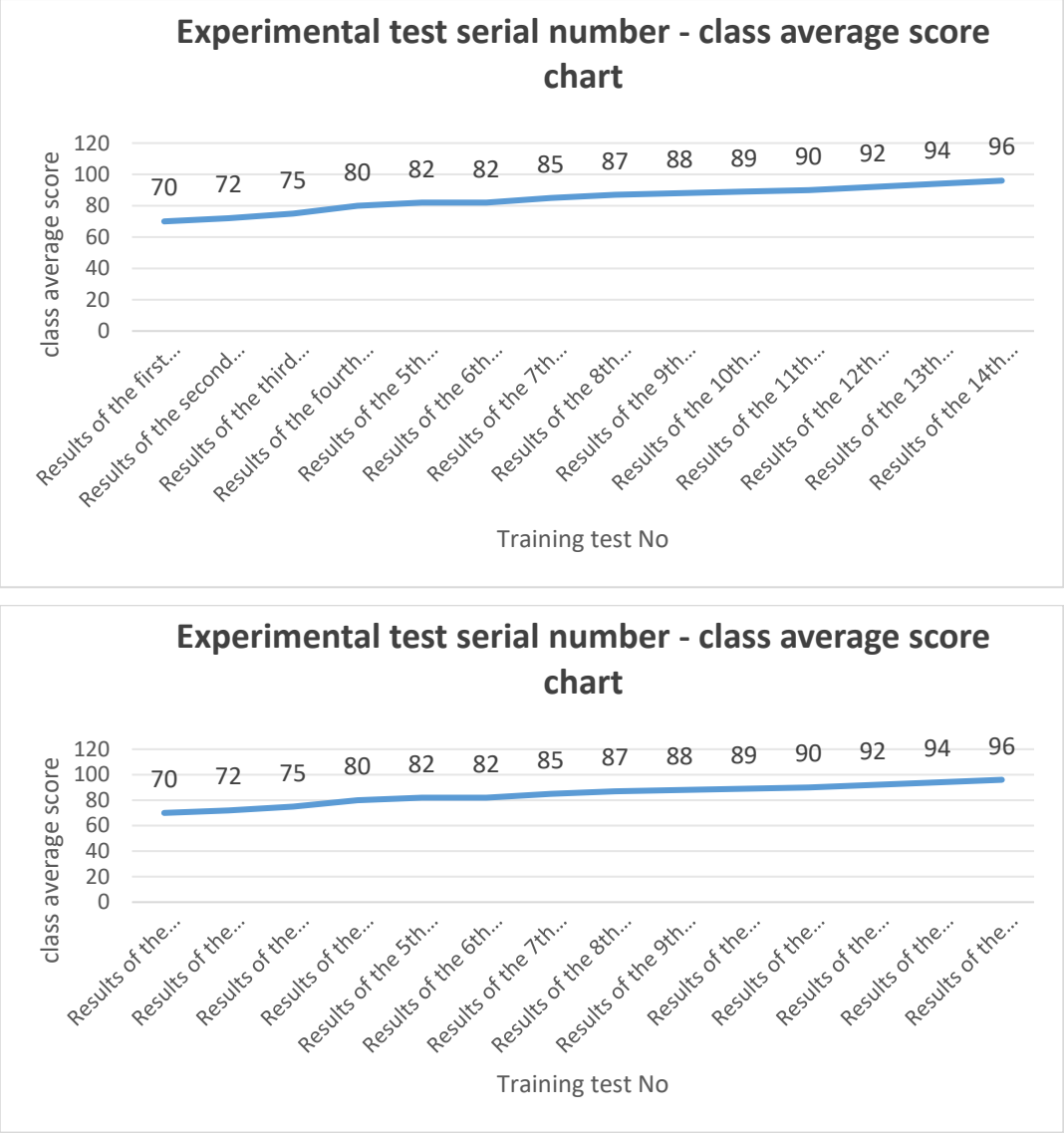


Fig.4 Average score of training test in experimental class

The author lists the training test scores (average score) of the experimental class. (See Table 4 for details)

Table 4. Training test results of experimental class (average score)

Experimental test serial number	Average class score
Results of the first training	70
Results of the second training	72
Results of the third training	75
Results of the fourth training	80
Results of the 5th training	82
Results of the 6th training	82
Results of the 7th training	85
Results of the 8th training	87
Results of the 9th training	88
Results of the 10th training	89
Results of the 11th training	90
Results of the 12th training	92
Results of the 13th training	94
Results of the 14th training	96

Note: the platform realizes the whole process digital management of "teaching learning practice evaluation" through data exchange, and improves the teaching efficiency and effect.

As shown in Figure 4, by accurately pushing personalized learning suggestions, the author teaches students according to their talents, and the students' grades have been steadily improved, and the teaching

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

effect has been significantly improved.

4.3.2. Application of key technologies

4.3.2.1. AI assisted instruction

The researchers use AI technology to develop an intelligent question answering system to answer students' course questions in real time; Analyze students' simulated transaction data through AI algorithm, identify investment errors, and provide personalized strategy optimization suggestions.

4.3.2.2. Big data analysis

The researchers integrate the historical data, real-time market, policy trends and other big data resources of the securities market, carry out market trend analysis, industry hot spot prediction and other teaching activities, and help students establish data-driven investment thinking.

4.3.2.3. Live broadcast and cloud interaction

The researchers invite industry experts to carry out remote teaching through the live broadcast platform, organize students to have "cloud communication" with industry alumni, share employment experience and industry trends, and broaden students' horizons.

4.4. Multi evaluation reform: build a comprehensive evaluation system with competence and literacy as the core

4.4.1. Evaluation index system

A "knowledge ability literacy" trinity of multiple evaluation index system is established, as shown in Table 5 below:

Table 5. Multiple evaluation index system

Evaluation dimension	Core index	Proportion	Evaluation method
Knowledge dimension	theoretical basis, concept understanding, policy mastery	30%	online test (10%), final exam (20%)
Ability dimension	practical skills, analysis ability, strategy formulation, innovation achievements,	50%	simulated trading results (20%), analysis report (15%), competition performance (10%)
Literacy dimension	investment ethics, teamwork, communication and expression, learning attitude	20%	case debate (5%), group mutual evaluation (5%), teacher evaluation (5%), enterprise mentor evaluation (5%)

4.4.2. Innovation of evaluation methods

4.4.2.1. Process evaluation:

The researchers record students' autonomous learning duration, homework completion quality, classroom interaction performance and other data through the online platform for dynamic evaluation; Regularly carry out activities such as simulated trading resumption and strategy reporting to assess students' ability improvement in real time.

4.4.2.2. Practice achievement oriented evaluation

The researchers take the students' practice achievements such as simulated transaction yield, investment analysis report quality, competition awards and internship performance as the core evaluation basis, and highlight the application ability assessment.

4.4.2.3. Multi subject evaluation

The researchers build a trinity of "teacher evaluation, student mutual evaluation and enterprise mentor evaluation" to ensure the comprehensiveness and objectivity of the evaluation results. Teachers focus on knowledge and ability evaluation, students' mutual evaluation focuses on teamwork and communication ability, and business mentors focus on practical performance and job suitability evaluation.

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

4.5. Investment Ethics Integration: Take Value Shaping as the Soul and Build a Literacy Cultivation System

4.5.1. Integration of ethics teaching content

The module of "investment ethics and literacy" is specially set up in the course module, and the following core contents are included:

4.5.1.1. Compliance trading

The researchers explain the laws and regulations and trading rules of the securities market, analyze illegal cases such as insider trading and market manipulation (such as "327 treasury bond futures event"), and strengthen students' compliance awareness.

4.5.1.2. Honest investment

The researchers emphasize the importance of honesty in investment activities, and cultivate students' professional ethics of truthful disclosure of information and fair competition.

4.5.1.3. ESG investment

The researchers introduce the concept of environment, society and Governance (ESG) investment, guide students to pay attention to the social responsibility of enterprises, and establish the concept of sustainable investment.

4.5.1.4. Shaping the concept of wealth

Through case analysis, theme discussion and other methods, The researchers help students establish a correct concept of wealth of "rational investment, risk-taking, and giving back to society", and avoid speculative psychology.

4.5.2. Ethical cultivation path

4.5.2.1. Case teaching

The researchers select typical ethical cases such as "Ruixing coffee financial fraud" and "Zhangzi Island scallop incident", organize students to carry out debate and reflection, and deepen their understanding of investment ethics.

4.5.2.2. Scenario simulation

The researchers set up scenarios such as "whether to trade insider information" and "how to choose in the face of conflict of interest", so that students can stick to the ethical bottom line in the simulation decision-making.

4.5.2.3. Leading by example

Senior practitioners who adhere to professional ethics in the industry are invited to share their experience and play the exemplary role of example.

4.5.2.4. Assessment enhancement

The researchers incorporate the performance of investment ethics into the curriculum evaluation system, conduct assessment through case debate, ethics report and other ways, and guide students to pay attention to the cultivation of ethical literacy.

4.6. Core innovation points

Highlight the "subversiveness" -- for example, replace traditional blackboard writing with virtual simulation, replace full class with project-based learning, and replace single examination with enterprise evaluation.

5. Empirical Analysis on the Practical Effect of Educational Reform

In order to verify the practical effect of disruptive teaching reform, this study selected two classes of 2023 financial management major in a private undergraduate college as the experimental objects. The experimental class (45 people) adopted the "five in one" disruptive teaching reform scheme, while the control class (43 people) followed the traditional teaching mode, and the teaching cycle was one semester

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

(16 weeks, 64 class hours). Through the comparative analysis of multi-dimensional indicators, the teaching reform effect is analyzed.

5.1. Data Sources and Research Assumptions

5.1.1. Data source

The experimental data, including final examination results, simulated transaction yield, competition awards, questionnaire survey results, enterprise internship feedback, are from the teaching process records and third-party evaluation.

5.1.2. Research assumptions

H1: subversive teaching reform can significantly improve students' mastery of theoretical knowledge;

H2: subversive teaching reform can significantly improve students' practical ability;

H3: subversive teaching reform can significantly improve students' comprehensive literacy (risk awareness, ethical literacy, etc.);

H4: subversive education reform can significantly improve students' employment competitiveness.

5.2. Analysis of Empirical Results

5.2.1. Comparison of theoretical knowledge

The final examination adopts a unified test paper, covering multiple-choice questions, short answer questions, case analysis questions and other types, with a full score of 100 points. The final examination results of the experimental class and the control class are compared as shown in Table 6 below:

Table 6. Comparison of final examination results

class	number	average score	pass rate (≥ 60 points)	excellent rate (≥ 85 points)	standard deviation	t-test results (P value)
Experimental class	45	82.3	97.8%	35.6%	6.8	< 0.002
Control class	43	73.5	86.0%	16.3%	9.2	< 0.01

It can be seen from table 5 that the average score of the experimental class (82.3 points) is significantly higher than that of the control class (73.5 points), and the pass rate and excellent rate have also increased significantly, and the t-test results show that the difference between the two groups is statistically significant ($p=0.002<0.01$). This shows that the subversive teaching reform has effectively improved students' mastery of theoretical knowledge through modular content reconstruction, flipped classroom and other teaching methods. Hypothesis H1 is true.

5.2.2. Comparison of practical operation ability

The core evaluation indicators of practical ability are the simulated transaction yield, the quality of investment analysis report and the competition awards. The comparison results are as follows:

5.2.2.1. Simulated transaction yield

The average yield of the experimental class is 12.3%, and the highest yield is 35.6%; The average rate of return of the control class was 4.8%, and the highest rate of return was 18.2%. The yield of the experimental class is significantly higher than that of the control class, and the rationality of investment strategy and risk control ability are stronger.

5.2.2.2. Quality of investment analysis report

The researchers invite three industry experts to make blind comments on the investment analysis report of listed companies written by students, with a full score of 100. The average score of the experimental class was 81.5 points, and the average score of the control class was 68.3 points, the difference was significant.

5.2.2.3. Competition awards

12 students in the experimental class participated in the "Oriental Wealth Cup" National College Students' financial challenge and won 2 provincial second prizes and 3 third prizes; Only 3 students in the control class participated in the competition and did not win the award.

The above results show that the subversive teaching reform has significantly improved the students'

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

practical ability through simulation training, competition teaching integration, school enterprise cooperation and other ways, assuming that H2 is true.

5.2.3. Comparison of comprehensive literacy

Through questionnaires and interviews, students' risk awareness, ethical literacy, teamwork ability and other comprehensive qualities were evaluated. The results are shown in Table 7 below:

Table 7. Comparison of comprehensive literacy evaluation (unit:%)

evaluation index	experimental class (excellent+good)	control class (excellent+good)	difference range
risk awareness	91.1	67.4	+23.7
ethical literacy	88.9	58.1	+30.8
teamwork	93.3	72.1	+21.2
communication expression	86.7	65.1	+21.6
learning initiative	95.6	76.7	+18.9

From table 6, it can be seen that the excellent rate+good rate of students in the experimental class in various comprehensive literacy indicators are significantly higher than those in the control class, and the improvement of ethical literacy is the largest (+30.8%). This shows that the subversive teaching reform has effectively improved the comprehensive quality of students through risk prevention and control module, investment ethics integration, group cooperation and other ways. Suppose H3 is established.

5.2.4. Comparison of employment competitiveness

Tracking the internship and employment situation of the students in the two classes, the results showed that 18 students in the experimental class had internships in financial institutions such as securities and funds, of which 12 students successfully signed contracts, and the jobs included investment consultants, customer managers, researcher assistants, etc; Only 6 students in the control class entered the financial institutions for internship, and 3 students signed the contract successfully. The enterprise feedback shows that the experimental class students' practical ability, risk awareness and professional quality are more recognized, and their job adaptability is higher. This shows that the disruptive educational reform has significantly improved the employment competitiveness of students, assuming that H4 is true.

5.3. Summary of Teaching Reform Effect

The empirical analysis shows that the disruptive educational reform has achieved remarkable results in four core dimensions:

1) The mastery of theoretical knowledge has been significantly improved, and students have a deeper understanding of the basic concepts, analysis methods and policies and rules of securities investment.

2) The practical ability has been greatly enhanced, and the students' application abilities such as transaction operation, target analysis and strategy formulation are significantly better than those under the traditional teaching mode.

3) Comprehensive literacy has been comprehensively improved, and core literacy such as risk awareness, ethical literacy and team cooperation has been effectively cultivated.

4) The employment competitiveness is significantly enhanced, and the internship and employment quality of students are significantly improved, which can better meet the job demand of the securities industry.

6. Safeguard Measures and Prospects for the Implementation of Educational Reform

6.1. Safeguard Measures

6.1.1. Guarantee of teaching staff

Establish a double qualified teaching team of "school teachers+industry experts", and improve the level of teachers by "introducing in and going out". Introduce senior talents with experience in the securities industry as full-time teachers; Encourage school teachers to take temporary posts in financial institutions and obtain professional certificates such as CFA and securities qualification; Regularly invite industry experts to carry out teaching training to improve teachers' practical teaching ability[11-12].

ISSN 2522-6398 Vol. 9, Issue 2: 42-56, DOI: 10.25236/FER.2026.090207

6.1.2. Guarantee of teaching resources

Increase investment in teaching resources such as smart teaching platform, simulation training software and off campus practice base. Cooperate with financial institutions to build a training platform to ensure that the training content is synchronized with the market; Build a dynamically updated case database, question database and video resource database to provide support for teaching; Strive for school policy support, link the teaching reform results with teachers' Professional Title Evaluation and performance appraisal, and stimulate teachers' enthusiasm for reform.

6.1.3. System and mechanism guarantee

Establish a special working group for curriculum reform to coordinate the reform of teaching content, teaching methods, evaluation system, etc; Formulate the rules for the implementation of subversive teaching reform of the course of "securities investment" and the administrative measures for multiple evaluation and other system documents to standardize the teaching reform process; Establish a tracking and feedback mechanism for the effect of teaching reform, carry out regular research, and optimize the teaching reform plan in time according to the feedback of students, teachers and enterprises[13].

6.1.4. Industry collaboration guarantee

Deepen cooperation with financial institutions such as securities and funds, and establish a long-term and stable school enterprise collaborative education mechanism. Build talent training programs, share teaching resources, form teaching teams, and evaluate teaching effects, so as to realize the deep integration of education and industry, and ensure that the direction of education reform is consistent with the needs of the industry.

6.2. Research Prospects

The "five in one" subversive educational reform framework constructed in this study has achieved remarkable results in practice, but there is still room for further optimization

6.2.1. Continuous optimization of the content update mechanism

With the rapid development of the capital market, it is necessary to establish a more flexible content update mechanism and timely integrate new policies, new tools and new scenarios such as the registration system reform, digital RMB and cross-border investment to ensure the cutting edge of teaching content.

6.2.2. In depth application of digital technology

In the future, we can further explore the application of artificial intelligence, virtual reality (VR) and other technologies in teaching, such as developing VR simulation trading scenarios, so that students can immersively experience the real market environment; Using AI algorithm to build intelligent investment advisory teaching system, improve the intelligent level of teaching.

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