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Research on the Path of Implementing "Classroom Revolution" in Specialized Basic Courses of Higher Vocational Colleges: A Case Study of the Course "Fundamentals and Applications of Finance"

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Abstract: Classroom Reform stands as a pivotal initiative for implementing the Action Plan for Enhancing Quality and Excellence in Vocational Education and deepening the "Three-Education Reform" (targeting teachers, teaching materials, and teaching methods). Using Fundamentals and Applications of Finance as a representative case, this study addresses prevailing pain points and systemic bottlenecks in specialized foundational course instruction. It proposes a "Five-in-One Integration, Three-Dimensional Drive, Six-Step Interaction" implementation pathway for Classroom Reform, providing actionable guidance for Higher Vocational Colleges to advance pedagogical transformation. Key innovations include: Integrated curriculum-politics system: A finance-oriented ideological and political education framework is holistically constructed through coordinated development of curriculum design, pedagogical models, resource development, assessment systems, and faculty capacity building, thereby fulfilling the fundamental mission of fostering virtue through education. Three-dimensional content reconstruction: Teaching content is restructured across work tasks, application scenarios, and learning outcomes dimensions, driving deep convergence of "industry requirements, curricular standards, skill competitions, and professional certifications" (Gang-Ke-Sai-Zheng). Interactive pedagogical architecture: A six-step interactive teaching cycle ("Clarify, Analyze, Explore, Practice, Evaluate, Extend") is implemented, establishing a closed-loop smart classroom ecosystem featuring pre-class intelligent diagnostics, in-class interactive engagement, and post-course digital competency profiling. This comprehensive approach reconstructs a dynamic educational ecology, demonstrating a replicable model for vocational education reform.

Keywords: Higher vocational colleges; Classroom Revolution; Implementation path; Specialized basic courses

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1. Background of implementing "Classroom Revolution" in higher vocational colleges

"Classroom Revolution" is the core content of higher vocational teaching reform and a key entry point and

foothold for enhancing the adaptability of vocational education [1]. The Ministry of Education's Action Plan for Enhancing Quality and Excellence in Vocational Education (2020-2023) (Jiaozhi Cheng [2020] No.7) clearly proposes to implement the "Three Education Reforms" in vocational schools, promote the "Classroom Revolution" in vocational schools, adapt to the characteristics of diverse student sources, and push curriculum teaching reform to a deeper level.

Therefore, carrying out the "Classroom Revolution" in higher vocational colleges is a reform in vocational education concepts, models, teaching content, and teaching environment. It is the core content of promoting teaching reform in higher vocational colleges, and also a specific measure to implement the president of the CPC's proposal of "what kind of people to cultivate, how to cultivate them, and for whom to cultivate them" [2–4].

Courses are the carrier of implementing the "Classroom Revolution." Only when teaching reform effectively penetrates into the curriculum level can it truly enhance the adaptability of vocational education and improve the quality of talent cultivation. Therefore, taking the specialized basic course "Fundamentals and Applications of Finance" for the Financial Technology Application major as an example, this paper follows the reform mainline of "ideological and political education throughout the course, digital technology empowerment, integration of post-course-competition-certificate, and innovation of teaching mode." Through the integrated design of a finance-characteristic curriculum ideological and political system, the development of new-form textbooks to reconstruct teaching content, the integration of BOPPPS concept to innovate teaching mode, and the building of a closed-loop smart classroom, it comprehensively promotes the "Three Education Reforms" and proposes a "Five-in-One Integration, Three-Dimensional Drive, Six-Step Interaction" implementation path for "Classroom Revolution", aiming to provide a reference for higher vocational colleges to deepen classroom reform.

2. Necessity of implementing "Classroom Revolution" in specialized basic courses

Specialized basic courses are characterized by a strong theoretical nature, abstract content, and separation from practical needs, leading to pain points in classroom teaching such as "rigid integration of ideological and political education, dull and monotonous classrooms, insufficient digital empowerment, and shallow integration of post-course-competition-certificate." Against the background of the rapid iteration of AI technology and digital transformation, specialized basic courses represented by "Fundamentals and Applications of Finance" urgently need to solve the pain points and bottlenecks in classrooms through the "Classroom Revolution" [5–6].

2.1. Rigid integration of curriculum ideological and political education

The teaching design of curriculum ideological and political education has a "two skins" phenomenon, manifested as random embedding of ideological and political elements and a lack of systematic design in teaching implementation. The development of the "Red Finance" teaching resource database is insufficient, lacking professional characteristic cases, and "Chinese financial stories" have not been fully explored [7–9]. Therefore, it is necessary to design the curriculum ideological and political system in an integrated manner from curriculum design, teaching mode, resource construction, evaluation system, and teacher development to solve the problem of rigid integration and improve the effectiveness of moral education.

2.2. Shallow integration of "Post-Course-Competition-Certificate"

Textbook content lags behind new businesses, new scenarios, and new standards, and is disconnected from the

development needs of the financial industry. Classrooms lack real business scenarios, and teaching is separated from practical scenarios. The teaching content provides insufficient support for students' participation in competitions and certificate examinations, and the characteristics of outcome-oriented vocational education are not fully reflected [10–11]. Therefore, it is urgent to take the opportunity of reconstructing teaching content to strengthen the integration of "post-course-competition-certificate" from three dimensions: work tasks, application scenario driving, and learning outcomes by accurately linking typical tasks of job positions, vocational skill competition scenarios, and vocational skill certificate standards.

2.3. Imbalanced classroom ecology

Classrooms of specialized basic courses mostly adopt one-way lecturing and indoctrination, suppressing students' initiative, resulting in generally low participation in interactions, and learning effects not being timely fed back and consolidated. The lag in the construction of smart classrooms is also an important reason for dull and monotonous classrooms and ecological imbalance [12]. Therefore, it is urgent to introduce the BOPPPS concept to reconstruct the teaching organization form, strengthen teacher-student interaction and feedback through "six-step interaction", and create a vibrant classroom ecology by building smart classrooms [13].

3. Implementation path of "Classroom Revolution" in specialized basic courses

Adhering to the student-centered educational philosophy, with the reform mainline of "ideological and political education throughout the course, digital technology empowerment, integration of post-course-competition-certificate, and innovation of teaching mode", and taking "Five-in-One Integration, Three-Dimensional Drive, Six-Step Interaction" as the specific implementation path, the "Classroom Revolution" is promoted in depth by building a "Five-in-One" finance-characteristic ideological and political system, reconstructing teaching content with "Three-Dimensional Drive" for in-depth integration of "post-course-competition-certificate", and empowering with digital technology to build BOPPPS smart classrooms [14–15].

3.1. Deepening curriculum ideological and political education, building a finance-characteristic ideological and political system with "Five-in-One Integration"

"Five-in-One Integration" refers to the integrated design of a finance-characteristic curriculum ideological and political system from five aspects: curriculum design, teaching mode, resource construction, evaluation system, and teacher development.

3.2. Optimizing curriculum design

Customize operable ideological and political goals and integration points for curriculum project modules, focusing on clear requirements such as ideals and beliefs, emotional identification with the "Four Confidences", craftsmanship spirit, family and country feelings, and sense of historical mission. Build a clear ideological and political value chain, closely integrate value shaping, knowledge imparting, and ability training, and tell "Chinese financial stories" throughout the teaching implementation to exert the subtle educational effect of ideological and political education through the whole-process infiltration.

3.3. Reconstructing teaching mode

Build an ideological and political smart classroom relying on teaching platforms, new-form textbooks, and

digital resources to expand the breadth, depth, and warmth of integrating ideological and political elements with professional knowledge. Adopt the situational teaching method, case teaching method, and PBL group activity method to organically integrate ideological and political connotations into situational teaching. Guide students to think deeply about hot issues and moral and ethical issues in the financial field through interactive methods such as simulating real scenarios, creating problem situations, and case discussions, and produce visible learning outcomes in combination with ideological and political goals.

3.4. Exploring ideological and political resources

Focus on improving the "Red Finance" ideological and political resource database and telling "Chinese financial stories." Collect and sort out contemporary Chinese financial practices and red financial historical materials around curriculum project modules, introduce online resources such as the National Museum and "Learning Power", condense professional characteristic ideological and political cases, and extract unique Chinese-style financial ideological and political elements to provide resource support for the realization of curriculum ideological and political goals and teaching implementation.

3.5. Improving the evaluation system

The evaluation system is an important means to test the effectiveness of the curriculum ideological and political education. Through the integrated design of a diversified whole-process evaluation system that integrates knowledge, skills, and quality goals, strengthen the organic combination of process evaluation and summative evaluation. Specific evaluation methods are not limited to objective forms such as test questions, but focus more on subjective learning outcomes such as theme discussions and research reports, fully reflecting students' ideological and political learning trajectory and growth changes.

3.6. Strengthening teacher strength

Teachers are the key to the implementation of curriculum ideological and political education, and strengthening teacher strength is an inevitable requirement to improve the effectiveness of curriculum ideological and political education. Adopt the "external introduction and internal connection" method to form a curriculum ideological and political teaching team, regularly participate in ideological and political education special training activities, share curriculum ideological and political construction experience, and improve teachers' ideological and political literacy and teaching ability. Strengthen inter-school exchanges and cooperation by organizing ideological and political teaching seminars and building teaching practice platforms.

4. Focusing on content reconstruction, "Three-Dimensional Drive" for in-depth integration of "Post-Course-Competition-Certificate"

"Three-Dimensional Drive" refers to reconstructing teaching content from three dimensions: work tasks, application scenarios, and learning outcomes, and taking the development of new-form textbooks as the starting point to deeply integrate "post-course-competition-certificate."

4.1. Extracting typical tasks

Connect with the core target job groups in the financial industry, extract typical work tasks with reference to national vocational standards, and realize the organic connection between classroom teaching knowledge

modules and the knowledge, ability, and literacy requirements of vocational positions through iterative updating of curriculum standards, teaching content, and course lesson plans, so as to promote "post-course integration" through typical work tasks.

4.2. Creating application scenarios

Introduce competition modules in vocational skill competitions such as "Smart Finance" and "Comprehensive Banking Business Skills", organically integrate competition standards into course evaluation, and strengthen the standardized training of students' practical abilities by creating financial vocational application scenarios, so as to implement "course-competition integration" through application scenarios.

4.3. Optimizing learning outcomes

By linking with vocational qualification assessment requirements, improve the knowledge correlation with professional skill level certificates such as banking, securities, fund, and futures practitioner qualifications, "1+X" financial big data processing, personal insurance claims, and family financial planning, increase students' certificate pass rate, and deepen "course-certificate integration" through learning outcomes.

4.4. Reconstructing teaching content

Jointly develop new-form textbooks with industry experts, vocational skill competition experts, and 1+X certificate assessors to consolidate the achievements of "post-course-competition-certificate" integration by reconstructing textbook content. After optimization and reconstruction, "Fundamentals and Applications of Finance" forms a curriculum mapping system of "12 teaching application scenarios + 10 project-based modules + 39 sub-tasks + 64 skill points."

5. Empowering teaching with digital technology, "Six-Step Interaction" to reshape positive classroom ecology

5.1. Creating a "Six-Step Interaction" teaching mode

The BOPPPS teaching mode is goal and task-oriented, student-centered, and emphasizes participatory learning and teaching feedback. "Six-Step Interaction" refers to integrating the BOPPPS concept into the pre-class, in-class, and post-class stages, creating six links: clarifying tasks, analyzing tasks, exploring principles, practical exercises, evaluating and summarizing, and expanding tasks, strengthening teacher-student interaction and feedback to stimulate classroom vitality, and helping students return to the center of the classroom.

5.1.1. Pre-class stage

Clarifying tasks: Teachers release learning tasks and discussion themes through the course platform, guide students to carry out PBL group research, and identify teaching key and difficult points based on learning situation data analysis. Students complete preview and pre-class tests through digital resources, and complete group research under the guidance of teachers to form theme reports.

5.1.2. In-class stage

Analyzing tasks: Based on learning situation data, teachers promote task analysis, clarify teaching goals, and create situations with digital resources to introduce teaching tasks, arousing students' interest.

Exploring principles: Teachers help students master theoretical knowledge through explanation and demonstration, case analysis, etc., integrate ideological and political elements into the process of exploring principles, and organize students to discuss and interact around hot issues in the financial field.

Practical exercises: Teachers organize students to display PBL group activity results in the form of theme reports, carry out interactive Q&A, inspire students to apply principles flexibly, and break through teaching key and difficult points under task driving.

Evaluating and summarizing: Teachers adopt multiple evaluation methods, such as "group mutual evaluation + teacher comments + platform assessment" to evaluate learning effects, timely feedback task completion, and improve teaching implementation effects.

5.1.3. Post-class stage

Expanding tasks: Teachers release after-class assignments and extended resources relying on the course platform, carry out after-class interactive Q&A with the help of visual student digital profiles, implement layered teaching and personalized guidance, and consolidate learning outcomes.

5.2. Building a closed-loop smart classroom of "Pre-Class Intelligent Diagnosis—In-Class Interactive Teaching—Post-Class Digital Profiling"

5.2.1. Pre-class stage

Carry out intelligent diagnosis and dynamic lesson preparation to achieve precise teaching intervention. Teachers release preview tasks and resource pushes through the learning platform, carry out pre-class tests and learning situation analysis, build students' ability radar charts, timely adjust teaching goals, curriculum key and difficult points, task difficulty gradient distribution, and implement layered teaching. Use the Smart Board Treasure Box to complete lesson preparation tasks such as beautifying teaching courseware and proofreading, and revising teaching plans.

5.2.2. In-class stage

Empower teaching interaction and learning situation feedback during class to improve implementation effects. Give full play to the fulcrum role of new-form textbooks, use digital resources to create situational teaching, and intersperse teaching activities such as real-time interactive evaluation, quick answers, and voting in the teaching implementation process to mobilize students' participation enthusiasm and stimulate classroom vitality. Teachers pay real-time attention to interactive feedback data, grasp the teaching progress and knowledge point mastery dynamics, and improve teaching implementation effects.

5.2.3. Post-class stage

Build student digital profiles and evaluation feedback after class to timely consolidate learning outcomes. Release assignments, push resources, complete online assignment marking and comments, and give targeted guidance and feedback. Collect multi-dimensional student learning behavior data such as video viewing duration, test accuracy, discussion participation, classroom interaction frequency, and assignment marking, build student digital profiles, and provide personalized guidance. Use open-source AI resources such as DeepSeek, Kimi, and Doubao to build AI teaching assistant robots to achieve full-process companionship and all-around real-time Q&A.

6. Conclusion

This paper addresses the current pain points in specialized basic courses of higher vocational colleges, takes the course "Fundamentals and Applications of Finance" as an example, explores teaching reform, and proposes a "Five-in-One Integration, Three-Dimensional Drive, Six-Step Interaction" implementation path for "Classroom Revolution", providing a reference for higher vocational colleges to deepen the "Classroom Revolution" in specialized basic courses. By building a "Five-in-One" ideological and political system, it solves the problem of rigid integration of curriculum ideological and political education, and innovates a finance-characteristic curriculum ideological and political teaching mode. Taking the development of new-form textbooks as the starting point, it reconstructs teaching content from three dimensions of task driving, scenario driving, and outcome driving to promote the in-depth integration of "post-course-competition-certificate." By integrating the BOPPPS concept into the pre-class, in-class, and post-class stages, creating a six-step interactive classroom process of "Clarify, Analyze, Explore, Practice, Evaluate, and Expand", and building a closed-loop smart classroom of "pre-class intelligent diagnosis—in-class interactive teaching—post-class digital profiling", it strengthens teaching interaction and feedback to stimulate vitality, helps students return to the center of the classroom, and reshapes a positive classroom ecology.

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