

Original Research Article

Research on the construction of “Post-course-competition-certificate-research-creation” integration training mode for vocational undergraduate finance and accounting majors*Chengyin Gao , Siyang Hu**Hainan Vocational University of Science and Technology, Haikou City, Hainan Province, 570203, China*

Abstract: This paper focuses on the construction of the “Course-Competition-Certificate-Research-Creation” integrated training mode for vocational undergraduate finance and accounting majors. By analyzing the current practices in curriculum systems, competition integration, certification alignment, research innovation, and industry-academia collaboration, it identifies issues such as disconnection between courses and competition standards, imperfect innovation mechanisms, and insufficient resource integration. Solutions including dynamic curriculum optimization, research-creation practice platforms, and deepened are proposed to enhance professional and innovative competencies, providing insights for vocational education reform.

Keywords: Vocational undergraduate education; Finance and accounting major; Course-competition-certificate-research-creation integration; Training mode

1. Introduction

The rapid evolution of global industries and technological advancements has significantly reshaped the demand for skilled professionals in finance and accounting. Vocational undergraduate education, as a critical bridge between academic knowledge and practical competencies, faces mounting pressure to align its training models with dynamic market needs. Traditional pedagogical approaches in finance and accounting education often prioritize theoretical instruction over practical skill development, resulting in a mismatch between graduate capabilities and employer expectations. Concurrently, emerging trends such as digital transformation, interdisciplinary innovation, and the integration of industry certifications into education have highlighted the urgency to reform existing training frameworks. Against this backdrop, the “Course-Competition-Certificate-Research-Creation” (CCCRC) integrated training model emerges as a transformative strategy to cultivate professionals who are not only technically proficient but also adaptable to real-world challenges^[1].

2. Analysis of the current situation of the integration cultivation mode of “Classes, competitions, certificates, research and creation” for vocational education undergraduate accounting programs

After the promulgation of the National Implementation Plan for Vocational Education Reform in 2019, the vocational undergraduate finance and accounting program has gradually promoted the “class-competition-certification-research-creation” integration training mode. Data show that from 2019 to 2023, the proportion of practical courses has increased from 31% to 45%, and the number of institutions participating in vocational skills competitions has increased by 75%, covering more than 80% of vocational undergraduate colleges and universities in China. The average annual pass rate of primary accounting qualification certificate has increased from 52% to 68%, and some institutions have introduced the “1+X” certificate system, realizing the initial interface between the curriculum and industry certification. The field of scientific research and innovation is

developing rapidly, with the number of university-level or above scientific research projects in accounting and finance increasing by an average of 18% per year from 2020 to 2023, the number of university-enterprise co-operation projects rising from 12% in 2019 to 42% in 2023, and the participation of headline enterprises such as UFIDA and Kingdee in the co-construction of practical training bases and case libraries^[2]. In addition, since 2022, many institutions have piloted the mechanism of “integration of competition and education”, incorporated the contents of provincial-level or above competitions into elective courses, and set up special funds to support students’ innovation and entrepreneurship projects, so that the number of students’ entrepreneurship incubation projects will increase three times in 2023 compared with 2019, gradually forming the practice ecology of “promoting creation by competition”. The number of student entrepreneurship incubation programs will triple in 2023 compared with 2019, gradually forming a “competition for creation” practice ecology.

Figure 1. Annual Trends of Key Indicators in the CCCRC Integration Model for Vocational Undergraduate Accounting Programs (2019–2024).

3. Existing problems of the integration cultivation mode of “Classes, competitions, certificates, research and creation” for vocational undergraduate finance and accounting majors

3.1. Disconnection between curriculum content and competition/certification standards

Vocational accounting curricula often prioritize theoretical foundations over practical skills required by modern competitions and certifications. Course content rarely incorporates real-time financial tools, data analytics, or scenario-based challenges emphasized in competitions, leaving students unprepared for these high-stakes environments. Similarly, certification exams increasingly demand competencies in digital finance and interdisciplinary collaboration, which are inadequately addressed in syllabi. The lack of systematic integration of competition modules or certification-focused training into core courses further widens the gap, as such activities remain optional add-ons rather than embedded learning components. This misalignment diminishes students’ ability to validate skills through industry-recognized benchmarks^[3].

3.2. Weak integration of research innovation and entrepreneurial education

Research and entrepreneurial training in accounting programs operate in isolation, with limited cross-disciplinary synergy. Academic research focuses on traditional topics, seldom addressing real-world business challenges or fostering entrepreneurial thinking. Innovation-oriented courses, meanwhile, remain generic, emphasizing basic business planning over industry-specific problem-solving or leveraging financial expertise for sustainable ventures. Faculty-led research rarely engages students in commercialization processes, and institutions lack dedicated platforms—such as innovation labs or startup mentorship networks—to bridge academic discoveries with market applications. This disconnect stifles students’ ability to translate theoretical insights into actionable innovations^[4].

3.3. Superficial industry-academic collaboration and resource fragmentation

Partnerships between vocational institutions and accounting firms often lack depth, limited to superficial internships or occasional guest lectures. Collaborative curriculum design, resource sharing, and competency-based training co-development are rare, leaving students without exposure to cutting-edge industry tools or complex financial scenarios. Enterprises seldom contribute to updating course content or providing hands-on mentorship, while institutions struggle to integrate fragmented initiatives into a cohesive practical training framework. This insufficient resource pooling and strategic alignment results in outdated skill development, failing to meet evolving industry demands.

4. Optimization measures for the integration cultivation mode of “Classes, competitions, certificates, research and creation” in undergraduate accounting programs

4.1. Dynamic curriculum system aligned with competitions and certifications

Vocational institutions should redesign accounting curricula to embed competition and certification requirements into core courses. This involves modular course structures that integrate real-world competition scenarios, such as budget optimization challenges, and certification-focused skill drills. Establishing a curriculum committee with educators, industry experts, and certification bodies ensures annual updates to address emerging fields like digital finance. A credit transfer system can incentivize students by recognizing competition achievements or certification milestones as academic credits, directly linking learning outcomes to industry benchmarks^[5].

4.2. Integrated research-innovation platforms with incentives

Institutions should create innovation hubs where students collaborate with faculty and industry mentors on practical projects, such as developing cost-saving strategies for SMEs. These hubs must offer dual incentives: academic rewards (priority for advanced studies) and industry opportunities (internships). Embedding entrepreneurial training into research workflows—requiring market analysis for projects—ensures solutions are commercially viable. Regular pitch events with investors can bridge academic research and real-world applications.

4.3. Enhanced industry-academia collaboration for resource integration

Deepening requires structured partnerships beyond internships. Institutions and firms should co-develop competency-based training modules, such as joint courses on advanced financial software. Resource-sharing platforms can provide students access to enterprise tools like cloud accounting systems. Establishing advisory boards with industry leaders ensures curricula reflect current practices, while rotating faculty-industry roles promote knowledge exchange. This strategic alignment ensures practical training meets evolving industry needs.

5. Conclusion

This study explores the construction of the “Course-Competition-Certificate-Research-Creation” (CCCRC) integrated training model for vocational undergraduate accounting programs, addressing the critical need to align education with industry demands. By analyzing current practices, the research identifies systemic gaps, such as curriculum-competition misalignment, fragmented innovation mechanisms, and insufficient. Proposed solutions include dynamic curriculum restructuring to embed competition and certification requirements, establishing innovation hubs to bridge research and entrepreneurship, and fostering strategic industry partnerships for resource integration. These strategies emphasize practical skill development, interdisciplinary collaboration, and real-world problem-solving, aiming to cultivate accounting professionals equipped with both technical proficiency and adaptive innovation capabilities. The CCCRC model not only responds to national policies advocating for vocational education reform but also offers a replicable framework for institutions seeking to enhance graduate employability and industry relevance in a rapidly evolving financial landscape.

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