Research on the Optimization Pathways of Practical Teaching Models for Vocational College Accounting Teachers Under the Guidance of Industry-Education Integration

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Abstract

Vocational education at its core is geared towards the acquisition of practical skills, and of its disciplines, accounting is most outstanding in its stress on applied learning. It follows, then, that there is a compelling need for embedding theory and practice in the education of accountants effectively. Unfortunately, the pragmatic teaching landscape presents several challenges: lack of congruence between curriculum formulation and industry expectations, lack of creativity in pedagogies, and lack of exposure to real practices among teachers. All these lead to serious shortcomings in students' job preparedness and practical skills. As industrial digitalization and intelligent finance continue their developmental trajectories, integration of industry and education has become a major catalyst for educational transformation. By cooperating with enterprises and sharing resources, pragmatic teaching can bring real business processes and advanced technological instruments into the learning environment and upgrade teachers' pragmatic teaching ability at the same time. It is against this background that this study explores the optimization of pragmatic teaching models of vocational college accountants under the guidance of enterprise-education integration. It seeks, through its findings, to correct existing inadequacies in teaching and provide both conceptual insights and pragmatic plans for enhanced development of talents in response to the burgeoning and evolving digital economy.

Keywords

Vocational Education, Practical Teaching, Industry-Education Integration, School-Enterprise Collaboration, Double-Qualified Faculty, Digital Transformation

1. Introduction

Higher vocational education plays a critical role in supporting industrial development by cultivating technically skilled, practice-oriented professionals. In disciplines such as accounting, where applied skills are essential, students must master both theoretical knowledge and practical competencies to meet real-world business demands. However, current vocational accounting education faces persistent challenges, including outdated teaching philosophies, misaligned curricula, limited instructional innovation, and disparities in faculty expertise. These issues undermine the effectiveness of practical teaching and widen the gap between graduate capabilities and market expectations.

In the context of rapid digital transformation and the rise of intelligent finance and taxation, industry-education integration has emerged as a key reform strategy. Strengthening collaboration between vocational institutions and enterprises enables the incorporation of real-world business processes and advanced technologies into the classroom. It also enhances the practical expertise of instructors and aligns teaching content with evolving industry standards. This integration not only addresses existing weaknesses in vocational accounting education but also supports the long-term development of more adaptive and innovative teaching models.

At the same time, employer expectations have shifted. Modern accounting roles require graduates to be proficient not only in basic theory but also in digital systems operation, data analysis, and agile decision-making. Traditional teaching models—dominated by lectures and simulations—are no longer sufficient. To meet these new demands, vocational institutions must rethink their practical training environments, pedagogical approaches, and assessment systems. Embedding digital platforms, real business scenarios, and enterprise resources into accounting education is no longer optional—it is essential for preparing students for the future of intelligent finance.

Moreover, the integration of emerging technologies such as cloud accounting platforms, robotic process automation (RPA), and financial data visualization tools has redefined the skill sets required in the accounting profession. Vocational institutions must therefore design curricula that not only reflect current technological applications but also anticipate future industry developments. This includes fostering students' digital literacy, data-driven thinking, and the ability to operate in cross-functional, tech-enabled environments.

In addition, the shift toward lifelong learning and skills-based employment models highlights the need for accounting education to go beyond one-time, degree-based training. Flexible learning modules, competency-based assessments, and modular certifications can support continuous professional development, helping graduates remain competitive in a constantly evolving job market.

In summary, the transformation of vocational accounting education must be comprehensive—spanning curriculum design, instructional methods, faculty development, and institutional collaboration. Only by embracing innovation, integrating industry resources, and prioritizing real-world skill development can vocational institutions effectively respond to the demands of intelligent finance and nurture accounting talent equipped for the digital era.

1.1 Research Background

The core mission of higher vocational education is to support industrial development by preparing technically skilled, practice-oriented professionals for frontline roles [1]. Central to this mission is practical teaching, which not only equips students with essential hands-on abilities but also serves as a key driver of collaboration between schools and enterprises—further deepening the integration of education with industry.

In accounting programs, where the discipline is inherently application-focused, the effectiveness of education hinges on students' ability to apply theoretical knowledge in real-world operational tasks and business processes. Compared to other fields, accounting places a stronger emphasis on practical training. In this context, teachers play a pivotal role—not only as instructors but also as professional role models—whose teaching strategies directly influence students' development of industry-relevant skills and mindsets. Well-designed, realistic training experiences that incorporate modern technologies can greatly enhance students' workplace readiness, problem-solving abilities, and data-oriented thinking. These competencies are increasingly essential for cultivating adaptable, job-ready accounting professionals in a time of rapid industrial transformation.

1.2 Problem Analysis

Although practical teaching plays a central role in cultivating accounting talent within higher vocational education, its overall effectiveness remains limited [2]. Several key factors contribute to this shortfall.

First, inconsistencies in teaching philosophy continue to persist. There is still an overemphasis on theoretical instruction at the conceptual level, while too little attention is given to simulating real-world business scenarios. As a result, students often find it difficult to bridge the gap between "knowing" and "doing."

Second, the curriculum has not kept pace with industry developments. Instruction continues to focus largely on traditional financial and computerized accounting, with limited integration of emerging fields such as intelligent finance and taxation, financial shared services, and ERP systems. This misalignment creates a significant gap between classroom learning and the practical skills demanded by employers.

Third, current practical training models are overly simplistic. Most still rely on the conventional "teacher-led instruction and student imitation" format, overlooking more dynamic and effective methods—such as project-based learning, case studies, and technology-enhanced instruction—that are critical for fostering students' problem-solving skills and innovative thinking.

Finally, faculty development remains a major constraint. The proportion of "double-qualified" teachers—those with both academic knowledge and real-world industry experience—remains low [3]. While many instructors are well-versed in theory, they often lack firsthand exposure to business operations and technological tools, limiting their ability to deliver truly effective applied training.

Taken together, these challenges continue to undermine the quality and impact of practical teaching in vocational accounting education, ultimately hindering the development of professionals who are fully equipped to adapt to and contribute within an ever-evolving industry landscape.

1.3 Research Significance

In this context, industry-education integration presents a promising pathway for enhancing practical teaching models. By deepening collaboration between vocational institutions and enterprises—and by promoting resource sharing and jointly developed curricula—educators can incorporate real-world business cases, advanced technological tools, and professional competency standards into the teaching process. This approach helps to better align educational objectives with the needs of modern industry.

In addition, it creates opportunities for long-term institutional partnerships that go beyond isolated projects and instead foster continuous innovation in curriculum design and teaching practice. As industries evolve, this dynamic alignment mechanism ensures that vocational training remains relevant and future-oriented.

Conducting a systematic exploration of how vocational accounting teachers can optimize their practical teaching under the framework of industry-education integration is therefore both practically valuable and strategically important. On one hand, it offers concrete solutions to existing challenges in practical instruction; on the other, it strengthens vocational education's ability to serve industrial development more effectively. Ultimately, this exploration contributes

to improving the quality of talent cultivation and to developing well-rounded, adaptable accounting and finance professionals capable of thriving in the era of digital transformation.

2. Challenges in Vocational Accounting Practical Teaching

As an essential discipline within higher vocational education, accounting carries the responsibility of preparing application-oriented professionals to serve both enterprises and society. In this context, practical teaching should stand at the core of talent cultivation. However, influenced by long-standing traditional models, many vocational colleges continue to emphasize theoretical instruction over hands-on training and knowledge delivery over skill development. This imbalance has resulted in less-than-satisfactory teaching outcomes, with current practices struggling to keep pace with the evolving demands of industry and the labor market.

These shortcomings not only hinder accounting students' professional skill formation but also weaken vocational education's contribution to industrial development. The underlying causes of these challenges can be distilled into four key areas, which are examined in the following subsections.

2.1 Misaligned Practical Teaching Philosophy

For many years, practical teaching in some vocational colleges has been narrowly defined as classroom exercises or laboratory simulations. The construction of accounting simulation laboratories and the expansion of experimental course systems have often been regarded as the primary focus of practice, while comparatively little effort has been directed toward incorporating authentic business operations into the learning process. Although enterprise-based training has been advocated by certain scholars, much of the discussion has remained theoretical, with limited examination of specific implementation strategies, organizational mechanisms, or practical feasibility [4].

This restricted interpretation of practical teaching—reducing it largely to laboratory-based activities—has diverted it from its fundamental aim of integrating learning with practice. Consequently, existing approaches have struggled to support the development of versatile, practice-oriented accounting professionals, thereby undermining the objective of cultivating both "composite" and "generalist" talent.

In many institutions, students rarely encounter operational tools such as real-time tax software, cloud-based bookkeeping systems, or live data sets. The lack of exposure to professional business workflows leads to a gap between instructional scenarios and workplace realities. Without adequate immersion in authentic enterprise contexts, students' problem-solving abilities and decision-making logic remain abstract and underdeveloped.

2.2 Lagging Updates to Teaching Content

In recent years, many vocational colleges have introduced practical courses such as computerized accounting and ERP operations. However, these courses are often restricted to demonstration-based or simulated exercises, providing students with only a partial and fragmented experience. For example, ERP instruction commonly emphasizes financial modules while neglecting the broader business chain, including procurement, production, and inventory management. Consequently, students are unable to develop a comprehensive understanding of enterprise operations.

In addition, curricular updates have not kept pace with rapid industrial advancements. Emerging areas such as intelligent finance and taxation, financial shared services, and data analytics are rarely incorporated into course design. This lag creates a mismatch between education and practice, leaving graduates underprepared for the demands of a digitalized business environment and diminishing both the relevance and credibility of vocational accounting education in the eyes of employers and society.

Some schools continue to rely on outdated teaching materials that reflect accounting practices from a decade ago. Course content often lacks modularity and flexibility, making it difficult to integrate real-time financial tools or customized industry-specific tasks. As a result, students miss opportunities to gain hands-on experience with the digital platforms and analytical frameworks that dominate modern accounting work.

2.3 Insufficient Innovation in Practical Training Models

Currently, practical training for vocational accounting students relies heavily on institutional arrangements and instructor guidance, leaving limited space for student autonomy and initiative. Shaped by an exam-oriented education culture, many students exhibit insufficient awareness and motivation to actively pursue real-world practice [5]. This issue is further compounded by enterprises' reluctance to host interns, stemming from concerns over confidentiality and potential risks, which further restricts students' access to authentic work experiences.

As a result, practical teaching remains largely institution-driven, with students' activities detached from actual business contexts, thereby reducing its overall effectiveness. By contrast, in developed countries such as the United States, students are actively encouraged to participate in practical experiences throughout both secondary and higher education, fostering stronger professional awareness and hands-on competence. This disparity highlights the comparatively lagging state of vocational accounting training models in China.

Moreover, most schools have not established dynamic practice mechanisms such as cross-campus entrepreneurship labs or cloud-based virtual internships. Even where partnerships with enterprises exist, they often function as one-off

collaborations rather than sustainable platforms. Without systematic innovation in training formats, students struggle to internalize business logic and workplace rhythm in a meaningful way.

2.4 Relatively Weak Faculty Capabilities

The composition of vocational accounting faculty in many institutions remains highly uneven. While a minority of instructors bring experience from industry or research institutions, the majority are recent graduates or academically oriented scholars with limited practical exposure. A critical weakness lies in the insufficient number of "double-qualified" teachers—those who possess both corporate experience and hands-on operational skills [6]. Although many faculty members demonstrate strong proficiency in delivering theoretical instruction, they often lack familiarity with enterprise management systems, internal control mechanisms, and financial information technologies [7]. This disconnect constrains their capacity to effectively supervise applied training and internships. As a result, practical instruction frequently becomes superficial, overly weighted toward theory, and fails to meaningfully improve students' workplace adaptability.

Overall, the challenges in vocational accounting practical teaching manifest in four main areas: narrow conceptualization, outdated curricular content, limited training models, and insufficient faculty capacity [8]. These issues are interrelated and collectively diminish the quality and effectiveness of teaching while also hindering alignment between talent cultivation and industry demand. In this context, industry-education integration has emerged as a crucial pathway. It is not only a means to overcome existing bottlenecks but also a strategic choice for upgrading and transforming practical teaching. By strengthening collaboration with enterprises, vocational colleges can integrate authentic business processes, advanced technological platforms, and competency standards into instruction. This approach also enables resource sharing and mutual benefit between schools and enterprises, laying the groundwork for building "double-qualified" faculty teams and improving the systematic and effective delivery of practical teaching. Adopting industry-education integration as a guiding principle has therefore become both an inevitable trend and a fundamental strategy for optimizing vocational accounting training models and enhancing the quality of talent cultivation.

From the perspective of industry-education integration, the restructuring of vocational accounting practical teaching models must move beyond superficial curriculum adjustments or isolated training activities. Instead, the entire educational process should be embedded within the industrial chain. At the level of educational objectives, integration ensures that talent cultivation aligns directly with labor market requirements by shifting the focus from "knowledge acquisition" to "skills development," thereby equipping students with job-ready competencies. At the level of educational content, real business cases, digital platforms, and professional standards are systematically incorporated into teaching, replacing outdated simulations with dynamic mechanisms responsive to industrial change. At the level of implementation, integration fosters seamless linkages across on-campus training, enterprise internships, and workplace practice, enabling students to strengthen competencies through iterative cycles of "learning by doing and doing while learning." At the level of support, it promotes institutional reform, the expansion of "double-qualified" faculty, and the sharing of enterprise resources [9].

Taken together, these mechanisms not only provide clear direction and momentum for optimizing vocational accounting practical teaching models but also serve as a necessary guarantee for advancing such teaching toward greater systematization, authenticity, and efficiency. Therefore, a systematic exploration of optimization pathways for vocational accounting teachers' practical teaching models under the framework of industry-education integration is both timely and imperative.

3. Pathways for Optimizing Vocational Accounting Practical Teaching Models Driven by Industry-Education Integration

With the rise of the digital economy and the advent of intelligent finance and taxation, vocational accounting education must transcend the traditional model of "classroom instruction plus laboratory training" [10]. By embedding authentic enterprise scenarios, leveraging industrial resources, and aligning curricula with occupational competency standards, new practical teaching models that are closely integrated with industry can be developed. Driven by industry-education integration, vocational accounting training can evolve along pathways characterized by bidirectional interaction between the education chain and the industrial chain.

3.1 Deepening School-Enterprise Collaboration in Faculty Development to Enhance the Quality of "Double Qualified" Faculty Teams

Teachers serve as the central force in practical teaching; however, most vocational accounting instructors currently lack sufficient real-world industry experience. Through the framework of industry-education integration, enterprise experts, industry practitioners, and professional accountants can assume roles as long-term "enterprise mentors," sharing teaching responsibilities and compensating for instructors' limited practical exposure. Initiatives such as the establishment of "enterprise teacher workstations" and the implementation of a "one teacher, one enterprise" model not only provide instructors with opportunities to gain frontline industry experience but also create direct channels for students to engage with current business practices. Such collaboration enhances instructors' applied competencies while generating sustainable momentum for cultivating strong teams of "double-qualified" faculty.

To ensure consistency in quality, institutions can develop faculty exchange programs with enterprises, where teachers regularly rotate into companies for short-term residencies. Additionally, training standards and evaluation systems should be co-developed to assess the real-world teaching effectiveness of participating instructors. These efforts will help bridge the gap between academic expertise and industry requirements on a continuous basis.

3.2 Jointly Developing Curriculum Systems to Align Content with Job Standards

Curriculum reform is central to optimizing vocational accounting practical teaching models. Through industry-education integration, institutions and enterprises can jointly compile textbooks, co-design course structures, and engage enterprises directly in the development of core modules, thereby ensuring close alignment with occupational competency standards. Embedding real-world cases and up-to-date business processes into coursework not only enhances timeliness but also exposes students to authentic industry challenges. This approach further advances modular, contextualized, and project-based teaching, thereby achieving the genuine integration of "teaching, learning, and doing."

In practice, this requires aligning course learning outcomes with job descriptions and task profiles drawn from enterprise operations. Each module should incorporate business scenarios that reflect specific functions such as accounts receivable processing, tax compliance, or budgeting analysis. Through this, students can progressively build job-relevant competencies while still within the academic setting.

3.3 Co-Building School-Enterprise Training Platforms to Create Authentic Learning Environments

Effective accounting training relies on the availability of high-quality practice environments. Through joint investment, schools and enterprises can establish financial management laboratories, ERP sandbox simulation platforms, and integrated training centers that replicate authentic business contexts. In parallel, students may undertake off-campus internships at tax bureaus, banks, and financial shared service centers, where they participate in real operational activities. Within this framework, enterprises serve not only as providers of training venues but also as co-designers and evaluators of the instructional process. This model of "two-way integration" ensures that training content remains closely aligned with evolving market demands.

To further enrich learning, virtual reality (VR) and cloud-based accounting tools can be introduced to simulate high-pressure business decision-making environments. Schools can also establish remote access systems that allow students to interact with enterprise data sets under supervision, enabling blended training modes that combine classroom, platform, and workplace learning.

3.4 Integrating Corporate Culture and Professional Ethics to Cultivate Students' Comprehensive Abilities

The optimization of practical teaching models must extend beyond the cultivation of technical skills to include cultural and ethical dimensions of professional development. Industry lectures delivered on campus by corporate executives can expose students to workplace norms and professional standards. When combined with local cultural elements, these initiatives further reinforce students' values and professional ethics. Such cultural integration enables students to develop not only strong technical competencies but also professional integrity and adaptability, thereby enhancing their employability, job stability, and long-term career development.

To systematize this approach, schools can incorporate ethics-focused training modules into practical courses, supported by real-life ethical dilemmas sourced from enterprise partners. Role-play activities and reflective journals can also be adopted to help students internalize ethical reasoning within complex professional contexts.

3.5 Building an Integrated Internship and Employment Platform to Promote Precise Alignment of Talent Cultivation

The ultimate goal of industry-education integration is to align talent cultivation with the needs of the labor market. By leveraging enterprise-provided job resources and establishing structured employment feedback mechanisms, institutions can facilitate a seamless transition for students from internships to full-time employment. Enterprise feedback also enables colleges to refine curricula and program structures on a continuous basis, creating a closed cycle of "internship-employment-feedback-improvement." Such mechanisms not only enhance graduates' employability but also provide enterprises with access to highly skilled, application-oriented professionals, thereby generating mutual benefits for both education providers and industry partners.

To maximize the effectiveness of this model, institutions should establish longitudinal tracking systems to monitor graduate employment outcomes and collect real-time feedback from employers. At the same time, internship experiences should be scaffolded in stages—starting from observation and simulation to participation in actual projects—so that students can gradually build workplace readiness. These refinements ensure that internship programs are not merely ceremonial, but play a critical role in competency development and curriculum evolution.

Industry-education integration has progressed beyond traditional models of school-enterprise cooperation to become the central driver of reform in vocational accounting practical teaching [11]. Through multiple mechanisms—including faculty collaboration, joint curriculum design, shared training platforms, cultural alignment, and integrated internship-to-employment pathways—this model strengthens the linkage between the education chain and the industrial

chain [12]. By embedding enterprise standards and authentic business practices into the educational process, it addresses long-standing deficiencies in practical teaching and establishes a sustainable foundation for talent cultivation [13]. Furthermore, within the context of digital transformation and the rapid development of intelligent finance, industry-education integration provides the strategic direction required for the continued advancement of vocational accounting education [14,15].

4. Conclusion

Practical teaching is central to vocational accounting education, as it directly shapes students' operational competencies, professional adaptability, and employability. However, current practices continue to be constrained by narrow conceptualizations, outdated curricula, insufficiently qualified faculty, and limited teaching models. These persistent challenges hinder vocational accounting programs from effectively meeting the dynamic demands of industrial development.

In response, industry-education integration has emerged as the most viable and strategic pathway for reform. Through collaboration between schools and enterprises in curriculum design, resource sharing, faculty development, and the creation of integrated internship-to-employment platforms, vocational colleges can address structural deficiencies inherent in traditional teaching models. This approach embeds authentic business processes and advanced technologies into instruction, ensuring that students acquire job-ready skills while still in school.

Beyond improving teaching quality in the short term, industry-education integration provides sustainable momentum for the long-term development of vocational education. It establishes mechanisms for continuous curriculum renewal in line with industrial transformation, fosters the cultivation of stable teams of "double-qualified" faculty, and strengthens the cultural and ethical dimensions of accounting education. Moreover, it promotes a closed-loop feedback system between employers and educators, ensuring that talent cultivation remains aligned with evolving labor market needs.

Therefore, adopting industry-education integration as a guiding principle is not merely an option but an imperative for the modernization of vocational accounting education. By continuously optimizing teaching models through deeper school-enterprise cooperation, vocational institutions can achieve genuine synergy between education and industry. Ultimately, this will facilitate the cultivation of high-quality, versatile accounting professionals who are capable of thriving in the digital economy and contributing to the sustainable development of both enterprises and society.

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