

# From Policy Texts to Teaching Settings: Decoding the Growth Paradigm and Practical Landscape of Dual-Qualified Teachers

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# From Policy Texts to Teaching Settings: Decoding the Growth Paradigm and Practical Landscape of Dual-Qualified Teachers

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## Abstract

Over the past three decades, China's policies on "dual-qualified" teachers have evolved to establish a systematic support framework for the teaching faculty. However, grassroots practice remains mired in the paradox of "policy symbolization" and "capability hollowing." Taking five vocational institutions as case studies, this article exposes the triple fragmentation mechanisms in policy implementation, namely "rigid standards - inert collaboration - unitary evaluation," and critiques the institutional flaws of "quick-fix training" and "academic qualification orientation." The study proposes that dual-qualified teachers need to reconstruct the three dimensions of teacher growth: explicit "dual-certificate" certification, implicit cultivation of multifaceted capabilities (including Professional Expertise, Technical skills, Industry experience, Innovativeness, Internationalization/Nationalization, Research Competence) , and identity-driven motivation. It calls for the construction of a new ecosystem for the collaborative development of industry-education integration in vocational education, promoting the transformation of teachers from "dual-certificate holders" to "dynamically adaptable" professionals, thereby providing systemic solutions for the high-quality development of vocational education.

**Keywords:** *Dual-Qualified Teachers, Vocational Education Policies, Teacher Capability Development*

## Introduction

As the reform of vocational education advances in depth, dual-qualified teachers, serving as the core nexus between industrial demands and educational supply, play a pivotal role in determining the effectiveness of industry-education integration. Despite the national policy's continuous emphasis on transitioning from "dual-certification" to "dual-competence," contradictions such as "certified but incompetent" and "superficial school-enterprise collaboration" persist in grassroots practices, reflecting a profound disconnect between policy ideals and classroom realities. While existing research predominantly focuses on macro-level policy design, there is a lack of empirical analysis on the institutional barriers hindering the differentiated implementation of policies across regions, particularly overlooking the "institutional paradoxes" in the development of teachers' competencies. To address these issues, this study conducted fieldwork in two secondary vocational

schools (ZA, ZB) and three higher vocational colleges (GA, GB, GC) from March to May 2025. Five group interviews, each lasting approximately one hour, were conducted to explore hot topics in the development of dual-qualified teachers, including their training objectives, current dilemmas, and competency characteristics. A total of 22 interviewees participated, generating over 40,000 words of qualitative data. This research delves into the current development issues surrounding dual-qualified teachers in vocational education, aiming to unveil the underlying logic of policy implementation gaps, propose dynamic and adaptive paths for teachers' self-growth, and offer practical references for the construction of vocational education faculties.

## Decoding the Policy Code: The "Dual-Qualification Gene Map" of National Strategy

The construction of China's "dual-qualified" teaching faculty has undergone over three decades of policy evolution, progressing from initial exploration to institutional refinement, and gradually forming a systematic support framework. Essentially, it represents a genetic map of dual-qualified teachers with practical empowerment as its core and dynamic adaptability as its goal, providing directional guidance and institutional safeguards for teachers' professional growth.

The evolution of policies concerning "dual-qualified" teachers in vocational education has primarily undergone four stages: the initial exploration phase, the institutional establishment phase, the in-depth development phase, and the comprehensive optimization phase. During the initial exploration phase, policies concentrated on enhancing teachers' practical capabilities and initially introduced the concept of "dual-qualified" teachers. In the institutional establishment phase, policies gradually quantified the proportion of "dual-qualified" teachers and refined the training and recruitment mechanisms. During the in-depth development phase, policies emphasized the connotative construction of "dual-qualified" teachers, driving reforms in qualification certification, school-enterprise cooperation, and evaluation mechanisms. In the comprehensive optimization phase, policies have focused on the high-level construction of the "dual-qualified" teaching faculty, reinforcing unified standards and dynamic management.

### *Initial Exploration Phase (1991–2000): Laying the Foundation for Practical Competence and the Emergence of the Concept*

In January 1991, the State Education Commission issued the "Opinions on Strengthening the Work of Regular Higher Vocational Education," which for the first time emphasized the need for teachers engaged in vocational college education to "enhance their professional practical competence" and incorporated practical experience into the criteria for professional title evaluations ([State Education Commission of the People's Republic of China, 1991](#)). In December 1995, the State Education Commission issued the "Notice on Launching the Work of Building Demonstrative Vocational Universities," in which the concept of "dual-qualified" teachers in vocational education was first introduced in policy documents ([State Education Commission of the People's Republic of China, 1995](#)). Taking this document as a benchmark, the policy on "dual-qualified" teachers in vocational education entered its initial exploration phase.

During the period from 1995 to 1997, policies started to explicitly mandate that specialized course teachers in vocational education should possess "dual-qualified" qualifications, necessitating

vocational colleges to have a certain proportion of faculty members with industry experience (former State Education Commission, 1997). In January 2000, the Ministry of Education issued the "Opinions on Strengthening the Work of Cultivating Talents in Higher Vocational and Specialized Post-Secondary Education," which proposed the training objective of "dual-qualified" teacher status, encouraging educators to acquire professional certifications and participate in enterprise-based practical experiences (Ministry of Education, 2000). However, there has yet to be a clear narrative or explanation regarding the specific connotation of "dual-qualified" teachers in vocational education. An elucidation of the scope of recognition, the procedures for recognition, the criteria for recognition, and the safeguards for such recognition is notably absent (Xu & Yuan, 2024).

During this phase, policies took practical competence as the entry point, supplemented by symbolic advocacy (such as encouraging school-enterprise cooperation), and initially constructed the standards for "dual-qualified" teachers through qualification certification and school-enterprise collaboration.

### ***Institutional Establishment Phase (2001-2010): Quantitative Allocation and System Construction***

In 2000, the "Opinions on Strengthening the Work of Cultivating Talents in Higher Vocational and Specialized Post-Secondary Education" issued by the Ministry of Education outlined plans to organize teachers to participate in social practice and encouraged those engaged in vocational education to obtain corresponding vocational certificates or technical grade certificates (Ministry of Education, 2000). In 2001 and 2002, the Ministry of Education required secondary and higher vocational colleges to increase the proportion of "dual-qualified" teachers to "a certain percentage," encouraged the recruitment of technical talents from enterprises, deepened the implementation of educational qualification attainment rates, and promoted the enhancement of educational levels (Ministry of Education, 2001, 2002). Meanwhile, schools were advised to give preferential treatment to teachers with "dual-qualified" attributes in terms of job promotion and salary increases (Ministry of Education, 2002). In September 2004, the Ministry of Education, along with five other departments, issued the "Several Opinions on Further Strengthening Vocational Education Work," proposing that teachers should undertake two months of practical experience in enterprises annually, which would be a prerequisite for promotion (Ministry of Education et al., 2004). In 2006, the "Several Opinions on Comprehensively Improving the Teaching Quality of Higher Vocational Education" issued by the Ministry of Education mentioned the gradual establishment of a "dual-qualified" teacher qualification certification system (Ministry of Education, 2006). Furthermore, the "National Outline for Medium- and Long-Term Educational Reform and Development Plan" in 2010 promoted the joint construction of training bases by schools and enterprises (Office of the Working Group for the National Outline for Medium- and Long-Term Educational Reform and Development Plan, 2010).

During this phase, incentive policies and capacity-building policies (such as the joint establishment of training bases by schools and enterprises) began to be introduced. The focus shifted from mere qualification requirements to the construction of a recognition system, forming a trinity training framework that integrates "practical experience + certificates + training."

### ***Phase of Deepened Development (2011-2020): Refinement of Standards and Innovation-Driven Progress***

Starting from 2011, the Ministry of Education and the Ministry of Finance mandated the cultivation of a highly qualified and professionalized "dual-qualified" teacher workforce as a goal (Ministry of Education et al., 2011), setting a quantitative target for the proportion of "dual-qualified" teachers to exceed 50%. A framework for the cultivation and training of "dual-qualified" teachers was gradually constructed, requiring regular undergraduate institutions to establish vocational and technical education colleges (Ministry of Education, 2011). From 2014 to 2019, teacher qualification standards were progressively refined, and professional standards for teachers were implemented (State Council, 2014). Support was provided for the effective operation of "dual-qualified" master teacher studios and platforms for the inheritance and innovation of teachers' craftsmanship and skills (State Council, 2017). The enterprise practice system was further detailed in policies, mandating "five-year cyclic comprehensive training" for teachers and initiating the construction of "structured teacher innovation teams," emphasizing teacher collaboration and modular teaching capabilities (State Council, 2019). In September 2020, the "Action Plan for Improving the Quality and Cultivating Excellence in Vocational Education" proposed the abolition of the "five exclusives" evaluation tendency, incorporating enterprise project experience into promotion criteria (Ministry of Education et al., 2020).

During this phase, a comprehensive approach was adopted by integrating hybrid policy instruments (such as preferential performance-based pay, enterprise practice systems, and master teacher studios) with the reconfiguration of teacher evaluation mechanisms. The focus shifted from merely meeting quantitative targets to enhancing quality, emphasizing the cultivation of a composite skillset integrating "technical proficiency + innovation" under a standardized training and evaluation system.

### ***Phase of Comprehensive Optimization (2021-Present): High-Quality Development and Dynamic Adaptation***

In October 2021, the General Office of the State Council issued the "Opinions on Promoting the High-Quality Development of Modern Vocational Education," explicitly formulating national standards for "dual-qualified" teachers. These standards stipulate that teachers must possess both "professional teaching capabilities" and "practical guidance capabilities," and introduce practical assessment modules such as "enterprise project design" and "technological achievement transformation" into the national teacher qualification examination (State Council, 2021). In 2022, the Ministry of Education promulgated detailed rules for the recognition of "dual-qualified" teachers, requiring provincial-level coordination of the recognition process and insisting that teachers' professional ethics and conduct serve as the primary criterion for evaluating their capabilities and qualities as "dual-qualified" teachers (Ministry of Education, 2022). The 2023 "Management Measures for Part-Time Teachers in Vocational Schools" mandate that technical backbone personnel from enterprises undertake responsibilities for "cultivating dual-qualified attributes," deepening the mechanism of mutual hiring between schools and enterprises (Ministry of Education et al., 2023). Regarding the teacher cultivation and training system, policies explicitly outline a three-dimensional framework comprising "school-enterprise co-construction of training bases + comprehensive rotation training for all staff + targeted cultivation." They continue to mandate comprehensive rotation training for all staff every five years, support the transformation of

higher vocational colleges into vocational and technical teacher education colleges, and rely on high-level engineering institutions to cultivate teachers by discipline. Simultaneously, these policies strengthen enterprise practice and the construction of teaching innovation teams.

During this phase, policies are guided by dynamic adaptation, emphasizing a four-dimensional teacher development ecosystem characterized by "prioritizing teachers' ethics, standardizing criteria, school-enterprise collaboration, and lifelong development."

Through four iterative phases of upgrading, China's "dual-qualified" teachers have seen a gradually constructed, comprehensive support system encompassing the entire chain of their development through policy initiatives. Despite the rigorous logic underlying this policy framework, there remains a potential for fragmentation in its grassroots implementation. When the ideal blueprint of top-level design clashes with regional disparities, industrial demands, and implementation inertia, the deep-seated contradictions in the cultivation of "dual-qualified" teachers gradually surface.

## **Bridging the Textual Divide: A "Spectrum of Dual-Qualified Teacher Dilemmas" in the Teaching Arena**

### ***The Disparity Between Policy Requirements and Practical Implementation (A Case Study of Five Interviewed Institutions)***

Through field research conducted at five institutions (Table 1), it has been found that there exist structural discrepancies between the implementation outcomes of the "dual-qualified" teacher policy at the institutional level and the policy objectives. Specifically, the following disparities have been identified:

Amidst the tension between the rigidity of standards and the diversity of industries, national policies emphasize a dynamic evolution from "dual certificates" to "dual competencies" and further to "multidimensional capabilities," requiring teachers to possess the ability to integrate industry and education as well as the capacity for technological achievement transformation. Particularly for emerging majors such as artificial intelligence and new energy, flexible and adaptable recognition guidelines need to be formulated. However, there exists a notable disconnect in the implementation process in Guangxi: the recognition standards are uniformly prescribed by the government, with schools passively executing them, lacking differentiated guidelines tailored to characteristic majors like intelligent terminals and robotics. For instance, in Guangxi vocational colleges (GB), teachers' achievements are still predominantly evaluated based on traditional teaching outcomes, while contributions to enterprise benefits and technological research and development are not adequately incorporated into the evaluation system. The contradiction between the "one-size-fits-all" policy design and the diverse needs of regional industries results in the failure to effectively reflect teachers' actual industry value.

In the contradiction between meeting quantitative targets and enhancing quality, Guangxi's provincial policies explicitly stipulate that the proportion of "dual-qualified" teachers in secondary vocational schools' specialized course faculties should exceed 80%, with a focus on recruiting young teachers and optimizing the faculty structure. Although Guangxi has achieved the quantitative benchmark (for instance, 81% of teachers in vocational college GB are dual-qualified), there exist underlying structural risks. Firstly, the age structure of the faculty is aging, with an

insufficient proportion of young teachers. A high reliance on seasoned, veteran educators raises concerns about future sustainability. Secondly, newly recruited teachers are required to accumulate experience through training labs, yet the training content often diverges from real-world industrial demands, resulting in a prolonged period for capability transformation. Consequently, new teachers struggle to promptly adapt to the teaching requirements that integrate industry and education, exposing an imbalance in policy implementation between short-term compliance and long-term capacity building.

In the tension between formal compliance and substantive effectiveness, while policies encourage the recruitment of high-level technical talents from enterprises and advocate for flexible hiring strategies, the implementation in Guangxi encounters multiple barriers. On one hand, due to disparities in remuneration and staffing constraints, enterprise technical pillars exhibit high mobility, making it challenging for them to commit to long-term tenures. Institutions of higher learning still rely heavily on government-set certification standards for recruitment, overlooking the alignment between actual teaching capabilities and industry experience. On the other hand, the evaluation mechanism has become oversimplified. As one interviewee remarked, "Once certificates are linked to the 'dual-qualified' status, teachers identified as such must possess certification levels obtained through examinations administered by the Ministry of Human Resources and Social Security" (ZB02). This has led to an excessive focus on certification levels rather than on teaching transformation abilities, resulting in some teachers being "certified but incompetent," thereby compromising teaching quality. This contradiction between policy orientation and implementation reflects deeper issues such as insufficient synergy between schools and enterprises and the absence of market-oriented incentive mechanisms.

It is worth noting that in terms of the iteration speed of vocational education policies, "the frequency of updates for high-profile national policies is relatively more rapid compared to basic education, implying that policies and requirements are in a constant state of flux and adjustment" (ZB01). Against this backdrop, the vocational teacher cohort not only has to meet the stringent requirements for "dual-qualified" capacity building but also needs to continuously keep abreast of policy orientations and promptly respond to institutional changes in areas such as teaching reform and the integration of industry and education. This poses an ongoing challenge to teachers' learning adaptability.

### ***Academic Debate: The "Competency Trap" and Institutional Paradox in the Cultivation of "Dual-Qualified" Teachers***

The disparity between the ideal vision of policy design and grassroots practice not only reflects issues at the implementation level but also reveals deeper logical contradictions in the cultivation model of "dual-qualified" teachers. Professor Xu Guoqing from East China Normal University, in his article "Dual-Qualified Teachers Cannot Be Cultivated" (Xu, 2024), acutely points out that "the attempt to 'create' dual-qualified teachers through short-term enterprise practice or training essentially reduces the complex process of competency development to a mere formal label." His critique primarily focuses on two aspects:

**The Temporal Paradox of Competency Development.** Xu Guoqing argues that genuine "dual-qualified" teachers should possess five key skill characteristics: functionality, systematicity, scientificity, diversity, and innovativeness. These competencies are typically cultivated through long-term practical experience in enterprises (spanning at least 5-10 years), coupled with

**Table 1:**  
*Interviewee Information*

	Institution Code	Interview Date	Region	Interviewee & Position	Personal Code
1	ZA	2025.03.27	Guangxi	Vice President, Director of Academic Affairs Office, Secretary of the Party Branch of the Business School, Dean, and Director of the Culinary Technology and Management Department	ZA01-ZA04
2	ZB	2025.03.28	Guangxi	Director of Academic Affairs, Deputy Director of the Cultural Tourism Department and Relevant Functional Departments, Department Head	ZB01-ZB05
3	GA	2025.03.27	Guangxi	Deputy Director of Academic Affairs and Training Management Office, Dean of the Tourism and Wellness College, Vice Dean of the School of Architecture and Art Design, Teachers and Relevant Responsible Persons of the Tourism and Wellness College	GA01-GA04
4	GB	2025.03.27	Guangxi	Vice President, Director of Academic Affairs Office and Relevant Department Heads	GB01-GB08
5	GC	2025.05.08	Guangdong	Hotel Management and Digital Operations Teacher at the School of Cultural Tourism	GC01

continuous reflection. However, current policies rely on short-term measures such as "teachers' enterprise internships" and "five-year rotational training," which only enable teachers to acquire fragmented operational skills or superficial industry insights. Such approaches fall short of nurturing teachers' profound understanding of technological principles or their innovative capabilities. This "crash-course cultivation" results in teachers being "certified but incompetent," with classroom



teaching descending into a "hollow" predicament.

**The Institutional Shackles of Academic Credentialism.** Despite policies advocating for the recruitment of technical talents from enterprises, the hiring practices in vocational colleges remain constrained by a "credentialism" mindset. Xu Guoqing points out that "high academic qualifications do not equate to high technical proficiency." For instance, there is a widespread requirement for master's degrees among secondary vocational school teachers and doctoral degrees for higher vocational college teachers. However, technical pillars in enterprises often possess lower academic qualifications. As a result, to meet the academic qualification thresholds, institutions are compelled to forgo candidates who genuinely possess practical experience. This "academic qualification first" hiring rule fundamentally conflicts with the "competency first" requirement for dual-qualified teachers.

Xu Guoqing's critique is corroborated by the interview cases in Guangxi: Although higher vocational colleges (GA) have introduced industrial robot projects through school-enterprise cooperation, teachers find it difficult to independently complete equipment debugging due to insufficient practical experience and thus rely on assistance from enterprise engineers; meanwhile, despite meeting the dual-qualified teacher ratio requirement through "certification," higher vocational colleges (ZB) find that the newly established colleges related to digital fields cannot match the skills of their teachers, leading to teaching that lags behind industrial demands. Furthermore, in recruitment, preference is given to graduates from traditional institutions such as Xi'an Jiaotong University and Beijing Jiaotong University. However, newly hired teachers lack frontline experience and require an additional two years of enterprise internships to become competent in teaching, further exacerbating the dilemma of "dual-qualified yet dual-incompetent" teachers. This contradiction reveals a fundamental proposition: the essence of dual-qualified teachers lies in being "experience-based talents" rather than "academic credential-based talents."

### ***Reconstructing the "Growth Code": Three Dimensions of Cultivating Dual-Qualified Teacher Competency***

The current challenges faced by Liuzhou in implementing policies, whether it be the imbalance in the age structure of teachers, the difficulty in quantifying the transformation of achievements, the barriers to talent recruitment, or the inadequacy of the training system, all fundamentally point to the construction and development of the "dual-qualified" teacher workforce. Through a review of the literature, it is found that existing research on "dual-qualified" teachers mostly adopts a macro perspective, focusing on policy-oriented discussions on topics such as the reform of the training system for "dual-qualified" teacher workforce construction (Xu & Yuan, 2024), the improvement of evaluation and incentive mechanisms (Liu, Jin et al., 2025), and the enhancement of the teacher professional development mechanism system (Cai, 2024). However, there is relatively less research from a micro perspective on the self-development of "dual-qualified" teachers' competencies. Most of these studies have merely touched upon the quality requirements of "dual expertise and dual competence" for "dual-qualified" teachers (Feng & Zhang, 2017) and teacher competency (Wang, 2022). There is a dearth of literature that systematically explores the self-growth pathways of "dual-qualified" teachers.

Furthermore, we must acknowledge that simply optimizing and refining policy frameworks, evaluation criteria, training systems, and incentive mechanisms is inadequate to transcend these predicaments. The crux lies in each individual who aspires to become a "dual-qualified" teacher

predicaments. The crux lies in each individual who aspires to become a "dual-qualified" teacher gaining a profound awareness of their own developmental path and the competencies and attributes they need to nurture. This self-awareness is pivotal for aligning more effectively with industrial sectors and adapting to the evolution and innovations within vocational and technical education. Consequently, this paper delineates a threefold dimensional approach to forging "dual-qualified" competencies, encompassing the acquisition of tangible "dual certifications," the cultivation of intangible multifaceted capabilities, and the construction of a deeply rooted, internally motivated Professional Recognition. These dimensions form a layered, interconnected, and externally propelled yet internally driven competency development system, which is instrumental in the construction of a "dual-qualified" teaching cadre. This, in turn, better caters to the emerging demands for technically skilled personnel in economic and social development.

**Explicit Characteristics: Dual Certifications.**

***Teacher Qualification Certificate: The Key to Educational and Teaching Access.*** The Teacher Qualification Certificate serves as a fundamental prerequisite for engaging in educational and teaching work. It represents a tangible acknowledgment of a teacher's theoretical knowledge and basic teaching skills in the field of education, and moreover, it functions as the "entry threshold" for the teaching profession (Ministry of Education, 1995). In the realm of vocational education, while the teaching of practical skills holds significant importance, theoretical instruction is equally indispensable. A teacher's solid teaching capabilities enable them to employ appropriate pedagogical methods to impart abstract theoretical knowledge to students in a vivid and accessible manner, thereby assisting students in constructing a comprehensive knowledge framework and providing theoretical underpinnings for the acquisition of practical skills. For instance, when elucidating the consumption psychology of tourists, a teacher may utilize the case study teaching method, integrating actual tourist behaviors observed in real-world travel scenarios to guide students in analyzing the underlying psychological factors. This approach not only stimulates students' interest but also deepens their understanding of theoretical knowledge, ultimately enhancing their ability to apply theoretical knowledge to resolve practical problems.

***Vocational Skill Level Certificates: A Robust Testimony to Industry Practical Competence.***

"Dual-qualified" teachers are required to demonstrate their professional competence in industry practice through vocational skill certifications, which serve as a significant marker distinguishing them from ordinary teachers (Dong & Luo, 2024). Vocational skill level certificates not only attest to a teacher's professional capabilities but also act as a bridge connecting teachers with the industry. These certificates enable teachers to stay abreast of industry technological requirements, integrate industry standards and occupational norms into their teaching content, and cultivate talents that meet industry demands. "These certificates necessitate teachers to undergo relevant training, enhancing their abilities in both teaching and practical skills, which they can then apply in our teaching to improve students' learning outcomes in technical skills," (ZB01). During the teaching process, teachers can impart the practical experience and professional knowledge they have accumulated while obtaining these certificates to students. Their firsthand demonstrations allow students to be exposed to authentic industry work scenarios in the classroom, thereby enhancing students' practical abilities and their adaptability to job roles.

In practical terms, the evaluation of "dual-qualified" teachers is often closely linked to the possession of "dual certifications." As one interviewee put it, "For a teacher to be recognized as 'dual-qualified,' they must hold a certificate issued by the Ministry of Human Resources and Social

Security at a certain level before they can apply for the 'dual-qualified' status" (ZB01). However, there are still institutions that regard the acquisition of "dual certifications" as the sole criterion for identifying "dual-qualified" teachers. While this approach may rapidly increase the proportion of "dual-qualified" teachers numerically and meet the national evaluation requirements, it merely emphasizes the external qualifications of "dual-qualified" teachers in a formalistic manner, failing to fulfill the requirements in terms of their competencies and qualities (Feng & Zhang, 2017).

**Implicit Traits (External Driving Force): Cultivation of Multifaceted Competencies.**

**Professional Expertise: The Cornerstone of Teaching.** Disciplinary professional knowledge, along with pedagogical knowledge and industry-specific practical knowledge (the latter corresponding to the "acquisition of dual certifications"), constitutes a crucial dimension of the competency profile for "dual-qualified" teachers. The organic integration of these three facets is pivotal for achieving effective teaching (Wang, 2022). A solid foundation in professional expertise serves as the bedrock upon which "dual-qualified" teachers base their pedagogical endeavors, forming a prerequisite for effective teaching. For instance, in the field of tourism management, teachers are required to possess in-depth knowledge spanning multiple disciplines, including tourism studies, management, and economics, thereby forming a systematic and comprehensive knowledge framework. This enables them to dissect the underlying causes of phenomena from multiple perspectives during case study instruction. Furthermore, in the wake of rapid technological advancements, particularly the development of artificial intelligence, and the swift evolution of the times, "dual-qualified" teachers must continuously update and enrich their professional expertise. They should stay abreast of industry trends and cutting-edge research findings, integrating new knowledge into their teaching to ensure that students' learning remains contemporary and better aligned with the developmental needs of the industry.

**Technical Skills: The Core of Practical Teaching.** Practical operational capabilities constitute one of the core competencies of "dual-qualified" teachers, directly influencing the effectiveness of cultivating students' vocational skills. Only when "dual-qualified" teachers themselves possess proficient technical operational abilities can they effectively guide students in their practical learning, ensuring that the skills students acquire in school align with the actual job requirements of enterprises. Consequently, numerous institutions adopt training approaches to further enhance teachers' technical skills. "Technical personnel must provide our teachers with repeated training sessions" (GA01). "In our efforts to cultivate a teaching faculty, we encourage young teachers to delve into new technologies" (GA03). "We also offer relevant training during our tenure, including national and provincial-level training programs during regular holidays and summer vacations" (GC01). For instance, in the realm of hotel services, teachers are expected to be proficient in guest room service skills, encompassing operational procedures such as room cleaning, linens change, and guest reception. They should also master catering service skills, including restaurant table setting, order-taking services, food delivery, and beverage services, as well as the operation and maintenance of hotel equipment and facilities. During practical training sessions, teachers guide students in restaurant table setting exercises. By meticulously explaining and demonstrating aspects such as the sequence of tableware placement, spacing, and napkin folding techniques, teachers enable students to master standardized catering service skills through practice, thereby elevating their practical operational proficiency and laying a solid foundation for their future careers in the tourism industry. Moreover, teachers should remain vigilant about industry technological trends,

continuously upgrading their own technical skill levels, and integrating the latest technologies and craftsmanship into their teaching, thereby nurturing high-caliber technical talent that meets the demands of the new era.

**Industry Experience: The Linchpin for Integrating Theory with Practice.** In the process of deepening the integration of industry and education in vocational education, the industry experience of "dual-qualified" teachers undoubtedly serves as a crucial link for achieving a profound integration of theory and practice. Possessing work experience in the industry enables "dual-qualified" teachers to gain an in-depth understanding of the actual operations of enterprises and the latest industry trends, thereby bridging the gap between schools and enterprises. At the practical level, numerous institutions have established stable practical platforms. "We select outstanding enterprises and designate them as our teacher training bases" (ZA01). Through hands-on work experiences, such as "new teachers being required to undertake temporary assignments in enterprises" (GB01) and "teachers spending two months each year in enterprises for temporary assignments" (ZB01), teachers' practical experiences are enriched, helping them to discern the dynamics of industry development. This, in turn, enables teachers to accurately grasp the competency requirements of the industry for talents, thereby cultivating students' vocational abilities in a targeted manner during teaching. Furthermore, teachers can leverage their industry resources to provide students with internship and employment opportunities, inviting enterprise employees to deliver lectures at the school and guide practical teaching. "Employees within enterprises act as mentors to our students; in essence, they assume dual roles, being both mentors in the enterprise and teachers in our school" (ZA01). "Teachers are mentors, and mentors are teachers; it is a mutually enriching process for both parties" (ZA02). In this way, teachers and enterprise personnel form a growth community characterized by bidirectional empowerment (a school-enterprise community), achieving profound sharing of resources between schools and enterprises, fostering in-depth cooperation between them, and truly realizing a seamless alignment between talent cultivation and enterprise demands (Jia & Liang, 2015). Therefore, teachers' industry work experience not only enhances their personal capabilities but also acts as a bridge between schools and enterprises, promoting the in-depth development of industry-education integration and injecting more practical elements into vocational education.

**Internationalization/Nationalization: Broadening Teaching Horizons.** In the contemporary era characterized by globalization and cultural diversity, the capabilities of internationalization and nationalization are of paramount importance for "dual-qualified" teachers. These capabilities serve as crucial tools for teachers to broaden their teaching horizons and elevate the quality of their instruction, adapting to the distinctive developmental goals of vocational colleges that evolve with the times.

With the internationalization of various industries, the wave of vocational education going global has been continuously rising. Various vocational colleges (such as ZA and ZB, secondary vocational schools in Guangxi) have successively launched international education programs. "In the future, there may be integrated cooperation with overseas enterprises" (ZA02). "Our school-initiated internationalization efforts in 2019. As a result, our teachers have undergone some international training in terms of faculty development, and all of them possess international certification credentials" (ZB02). "Currently, teachers' international literacy has also become a key cultural competency to be enhanced" (GB01). "We integrate domestic and international education in multiple forms" (GB03). "We also engage in extensive Sino-foreign cooperative education

programs, attracting international students to study here" (GC01). These initiatives include projects such as the China-Laos Luban Workshop and the China-ASEAN Community for the Integration of Production and Education, enabling not only the "import" but also the "export" of curriculum resources and technical skills. This also necessitates that "dual-qualified" teachers possess an international perspective and be well-informed about the development trends and cutting-edge technologies in the international market of their respective industries.

Moreover, the professional identity of "dual-qualified" teachers is characterized by its "humanistic" nature. Integrating ethnic cultural elements into teaching serves as a crucial avenue for achieving cultural inheritance and innovation (Xue & Su, 2021). As expressed by an interviewee, "One province, one service" means that when operating a school in Guangxi, we should serve the pillar industries of Guangxi well. Schools established in Liuzhou should cater to the industries and enterprises of Liuzhou" (ZB02). To better serve the characteristic industries in Guangxi based on local conditions, higher vocational colleges in Guangxi (GA) have adopted ethnic characteristics as their school-running features. They have established research societies for traditional intangible cultural heritage craftsmanship and designed a series of products with ethnic characteristics. Secondary vocational schools in Guangxi (ZB) have, in particular, pioneered an innovative educational model by integrating intangible cultural heritage (ICH) elements, known as the "Five Integrations, Four Entities, and Three Advancements" model for the modern inheritance of the "The Five Matriarchs of the Dong People" ICH. This model fully embodies the distinctive features of ethnic vocational education, earning them national-level teaching achievement awards in the field of vocational education. The cultivation of both internationalization and nationalization capabilities of "dual-qualified" teachers not only enhances students' overall competencies but also enriches the teaching content with unique characteristics and profound cultural connotations. This approach not only aligns with the development goals of schools aiming for distinctive educational identities but also propels the innovative development of disciplines and institutions.

***Innovativeness: The Key to Adapting to Industry Transformations.*** Innovativeness stands as a pivotal competence for "dual-qualified" teachers to adapt to the rapid transformations within the industry. This encompasses two main facets: digital literacy capabilities and the capacity for innovation in teaching competitions.

In the context of the digital era, the education sector should embrace technological advancements with an open mindset, leveraging the applications of artificial intelligence (AI) and emerging technologies in teaching to vigorously promote the digital transformation of vocational education and enhance teachers' innovative capabilities and teaching quality (Li, 2025). Digital literacy has thus emerged as one of the essential competencies for "dual-qualified" teachers. "In the forthcoming construction of supporting professional programs, teachers are also required to possess digital competencies, which is also referred to as the enhancement of AI-related qualities" (GB01), with the aim of facilitating the intelligent reform of educational models. However, there is a dilemma as mentioned by an interviewee (GA02): "We've bought the machines, only to find them gathering dust, unable to be integrated into our classroom teaching, and we're also in the dark about their full capabilities." "Dual-qualified" teachers should actively embrace new technologies, cultivate a lifelong learning attitude, take the lead in acquiring and mastering emerging technologies, and innovate teaching methods. For example, applying VR virtual simulation technology in tour guide training courses can significantly enhance students' interpretation skills; integrating DeepSeek in tourism planning projects; and utilizing word cloud diagrams during

brainstorming sessions in courses. Furthermore, propelled by the transformation in assessment methods, "current teacher evaluations also assess whether digital education reform tools and technologies are utilized to analyze students' pre-class learning conditions" (ZB02). Teachers should strive to introduce cutting-edge technologies into the classroom, scientifically evaluate the rationality of curriculum content and segment design, and ultimately improve teaching effectiveness and students' engagement in class.

Vocational education places significant emphasis on skills and technical competitions. "There have been adjustments in the requirements of the current National Technical Skills Competition. For the secondary vocational school group, the focus has gradually shifted from merely skills-based proficiency to incorporating an increasing emphasis on innovation" (ZB01). "In the evaluation of teacher skills competitions, attention is paid to whether the course content aligns with new industry trends, methodologies, and technologies" (ZB02). This necessitates that teachers possess keen insights during the guidance process. They are required not only to stay abreast of the latest industry trends and hot topics but also to seamlessly integrate them into the competition entries, offering innovative and creative guidance. By participating in such competitions, students not only enhance their professional skills but also cultivate innovative thinking and teamwork abilities. Meanwhile, "dual-qualified" teachers continually improve their own innovative capabilities and guidance expertise throughout this process.

**Research Competence: The Driving Force for Advancing Teaching and Industry Development.** Research competence serves as a differentiating competency for "dual-qualified" teachers, distinguishing outstanding educators from ordinary ones. It stands as the core impetus for promoting teaching reform and industry advancement (Wang, 2022), manifesting in two primary dimensions: pedagogical research and research within their specialized fields.

In the realm of pedagogical research, teachers are required to continuously engage in scholarly inquiry, actively exploring teaching methodologies, curriculum systems, and talent cultivation models that are tailored to the specific needs of vocational education within their respective disciplines (Xu, 2019). For instance, they may investigate how to apply project-based learning, case-based teaching, and situational simulation teaching methods in specialized course instruction to enhance students' learning motivation and practical skills. Additionally, they explore how to construct a curriculum system grounded in the work process, ensuring that course content closely aligns with the actual demands of industry positions. Through the application of pedagogical research findings, teachers continually refine the teaching process and elevate the quality of education.

In the context of research within their specialized fields, teachers are expected to remain vigilant about the hot-button and challenging issues plaguing the industry. "Our university places significant emphasis on research tasks, imposing substantial requirements on us in this regard" (GC01). Through in-depth research endeavors, teachers aim to furnish theoretical underpinnings and viable solutions to propel industry development and drive innovation in teaching content. This, in turn, fosters a profound integration between teaching and research activities.

**Intrinsic Traits (Intrinsic Motivation): Identity Recognition.** Teacher identity recognition represents a recurrent process and outcome through which teachers, as individuals, engage in reflective thinking about their identity and occupation during interactions, and reconstruct the meaning of their occupation (Yang, 2021). It holds paramount importance for their self-development. "I have been working at a secondary vocational school for 17 years, and I find myself



increasingly passionate about my profession. I believe I have developed a profound sense of identity with it" (ZB02). Positive emotional feedback from work can enhance teachers' socio-emotional competencies and exert a positive influence on their work engagement (Fan & Xu, 2024). Teachers with a strong sense of identity recognition are more adept at perceiving changes in the educational environment, proactively adjusting their teaching strategies, and achieving resonance between their self-development and the development of education.

In the field of vocational education, "dual-qualified" teachers are required to possess dual identities from both the vocational institutions and the industry, thereby forming a "dual-identity" recognition mechanism for their professional growth (Pan, 2025). Drawing reference from the dimensions of its measurement scale, this paper further elaborates on identity recognition by dividing it into four major dimensions: role recognition, occupational efficacy, community cohesion, and work engagement. The aim is that after "dual-qualified" teachers recognize their identities, they can accurately anchor their functional roles, generate endogenous motivation for teaching innovation, acquire sustainable momentum for career development, and thus form a spiral upward development path.

**Role Recognition: Clarifying Responsibilities of Multiple Identities.** Role recognition marks the initial step in identity formation. Vocational teachers must first comprehend their professional roles, encompassing both their roles as vocational educators and their roles within the social division of labor pertaining to their expertise. After gaining a profound understanding of their professional identities, vocational teachers will conduct a self-assessment of their careers. This process may evoke both positive and negative emotions. Only when positive emotions are abundant and stable does professional identity emerge (Pan, 2025). Consequently, role recognition serves as a crucial foundation for the identity recognition of "dual-qualified" teachers, necessitating that teachers clearly define their multiple roles in teaching, practical guidance, and students' career planning. Within the intricate landscape of vocational education, "dual-qualified" teachers are required to seamlessly transition between different roles, each of which carries distinct responsibilities and missions. It is not merely about recognizing their roles as teachers but also about attaining professional recognition within their respective industrial domains (ZA04).

The professional identity of "dual-qualified" teachers is characterized by both "pedagogical" and "molding" attributes (Xue & Su 2021). Teachers must recognize that they are not only disseminators of knowledge but also instructors of practical skills and guides for students' career development. In the classroom teaching setting, teachers assume the role of knowledge transmitters, responsible for conveying systematic professional knowledge to students in a clear, accurate, and vivid manner. At training bases, teachers transition into the role of practical mentors, guiding students through practical training, demonstrating practical techniques, and explaining practical details, thereby cultivating students' professional qualities and practical abilities through the process of error correction and adjustment. During the students' internship and employment phase, teachers become career guides. They need to gain a deep understanding of each student's personality traits, professional skill levels, and career interests, while maintaining close communication with numerous enterprises to gather information on job requirements, corporate cultures, and development prospects. By continually adjusting the key and difficult points in teaching, teachers provide assurance to help students better adapt to internship work. The clarity of role recognition directly influences teachers' level of engagement in teaching and the effectiveness of their instruction. Only by clearly defining their multiple roles can teachers maximize their effectiveness

in different teaching scenarios and cultivate high-quality talents that meet industry demands.

**Professional Efficacy: Enhancing Teaching Confidence and Motivation.** Competence serves as a crucial guarantee for an individual's work efficiency. The higher the competence level, the better the performance and the greater the enthusiasm for work. This passion is intricately linked to the establishment of one's professional identity (Pan, 2025). In the field of education, teachers' competence and professional passion are often transformed into concrete occupational efficacy through their perception of their own professional roles. Occupational efficacy refers to the firm belief that "dual-qualified" teachers hold regarding their ability to effectively enhance students' vocational competencies. It represents a subjective cognition of teachers about their own teaching effectiveness and professional influence (Bandura, 1997). This belief does not emerge spontaneously; instead, it is rooted in the students' outstanding performance and positive feedback throughout their internships, employment, and career advancement. When students receive high recognition from enterprises during their internships, such as winning awards in national technical and vocational skills competitions or being praised during the internship, teachers can directly perceive the fruits of their teaching, thereby bolstering their sense of occupational efficacy. "Amidst the demands for diversity and multi-skilled competencies, and within the intense internal competition, I have been making steady progress, achieving a certain sense of accomplishment. I feel both exhausted and joyful," (ZB02) This sense of efficacy not only validates teachers' teaching efforts but also acts as a potent intrinsic motivator, spurring teachers to engage more proactively in teaching, continuously explore new teaching methodologies and strategies, and ultimately enhance the quality of instruction. In comparison, teachers with a high sense of occupational efficacy tend to be more proactive in keeping abreast of the latest industry trends and technical requirements. They actively participate in various teaching training programs and seminars, learning advanced teaching philosophies and techniques to enhance their teaching proficiency and promptly update their teaching content and methods. As emphasized by Dong Zhaoxing and Luo Shengquan (2024), modern "dual-qualified" teachers are required to possess the core competency of "moral integrity and technical proficiency," which is not only reflected in their professional skills but also in their commitment to the educational cause and their sense of occupational efficacy in student cultivation. Occupational efficacy serves as an intrinsic driving force for teachers' continuous development, enabling them to maintain a positive attitude when confronted with teaching difficulties and challenges. It empowers teachers to continually improve their teaching capabilities and professional qualities, thereby providing more robust support for students' career development.

**Community Cohesion: Facilitating Knowledge Sharing and Collaboration.** The community cohesion in the professional development of vocational teachers has a notable impact on the formation of their professional identity (Pan, 2025). Meanwhile, community cohesion is also manifested at two levels: the active integration of "dual-qualified" teachers into teaching teams and industrial communities. It serves as a crucial avenue for teachers to acquire resources, enhance their capabilities, and achieve joint development (Wenger, 1999).

Within the internal teaching faculty of a school, teachers achieve knowledge sharing and experience exchange through participating in teaching seminars, jointly developing courses, and collaborating on teaching reform projects. Through close collaboration among team members, resources from various parties are integrated, resulting in richer and more practical course content, as well as more diversified teaching methods, thereby enhancing the overall quality of the courses. This form of teamwork not only enhances individual teachers' teaching competencies but also



generates a powerful collective teaching force, propelling the in-depth development of program construction and teaching reform.

Meanwhile, "dual-qualified" teachers can actively engage with tourism industry communities, fostering exchanges and collaborations with peer teachers, corporate experts, industry elites, and faculty from other institutions. Through these interactions, they can gain access to the latest industry trends, technological advancements, and market demands. The cohesion within such communities not only provides teachers with a broad platform for professional development but also enables them to continuously learn and grow through collaboration with others, thereby fostering a favorable ecosystem for their career advancement.

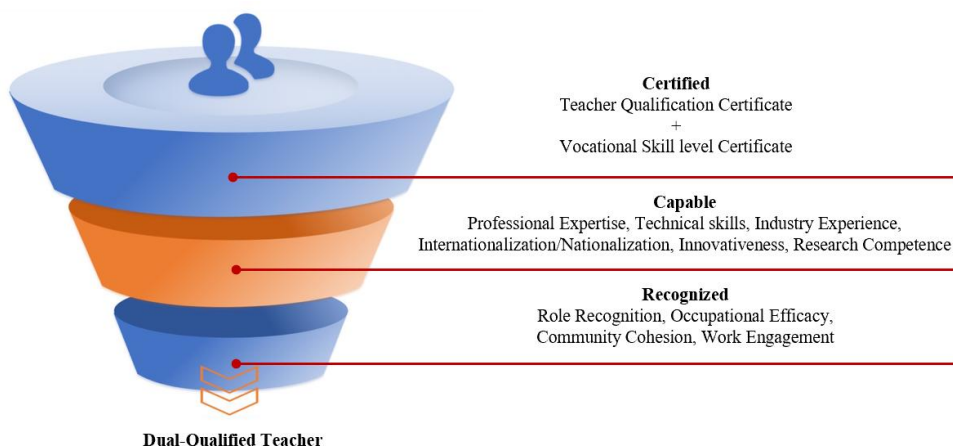
**Work Engagement: Embodying Educational Mission and Passion.** Work engagement holds significant importance for both organizations and individuals. It enhances work efficiency, facilitates the achievement of organizational goals, promotes personal career development, and strengthens team cohesion (Pan, 2025). Work engagement also serves as a tangible manifestation of the identity recognition of "dual-qualified" teachers, reflecting their wholehearted dedication to teaching in terms of time, energy, and emotional investment (Schaufeli et al., 2002). In terms of time commitment, it is demonstrated by teachers voluntarily utilizing their spare time to acquire new teaching techniques and knowledge in tourism, staying abreast of the latest industry developments, and continuously updating their knowledge base. Regarding energy investment, teachers meticulously design teaching plans and devote substantial efforts to guiding students in participating in various tourism skill competitions. Emotionally, teachers are deeply passionate about their teaching work, regarding the cultivation of outstanding talents for the tourism industry as their vital mission. Statements such as "I have been working at a secondary vocational school for 17 years, and I am increasingly fond of my profession" (ZB02) and "In the era of artificial intelligence, I am highly optimistic about my specialty. I believe both my specialty and my students will have a promising future. My enthusiasm for work will surely inspire them" (ZA04) exemplify this emotional commitment. The identity anxiety of "dual-qualified" teachers can be alleviated through cultural construction, with work engagement being a crucial aspect of this process and an external expression of teachers' professional identity recognition (Ou, 2018). Work engagement not only enhances teachers' teaching quality and professional competence but also inspires students, stimulating their learning enthusiasm and professional identity, thereby fostering a positive atmosphere of mutual teaching and learning.

### **Future Prospects: Building a New Ecosystem for the Vocational Education Development**

#### **Integration of Policy and Practice: Driving the Restructuring of the Vocational Education Ecosystem.**

**A bidirectional alignment mechanism between policy orientation and industry needs.** "Dual-qualified" teachers represent a unique group of teachers whose professional growth is intrinsically driven by an integration of theoretical teaching, practical experience, and technical skills (Li & Xing, 2020). In recent years, the state has successively introduced policies related to "dual-qualified" teachers, leading to a continuous increase in their numbers. However, the issue of talent quality urgently needs to be addressed. The design and updating of policies should dynamically align with industry needs as its core, focusing on the iterative requirements for teacher capabilities in emerging fields such as intelligent manufacturing and the digital economy. By establishing a competency standard system that matches industry needs, promoting dynamic adjustments to

**Figure 2:**  
*A Three-Dimension, Six-Capability Development Path Model*



curriculum modules, and ensuring that teaching content is both standardized and cutting-edge. For instance, teachers can develop modular curriculum systems that incorporate specialized content such as industrial robot operation and the application of digital management tools, and deeply integrate them with industry certification systems to form a closed loop of "teaching-industry-certification," thereby driving innovation in vocational education through professionalization.

**A dynamic upgrade path for teaching standardization.** To enhance the implicit work or learning performance of "dual-qualified" teachers, it is essential to create authentic, immersive, open, and shared practical contexts. Such specific teaching practice contexts require the establishment of an open, flexible, and mutually beneficial resource-sharing mechanism (Wang, Huang et al., 2024). By providing digital tools and situated teaching to facilitate capability development, and leveraging virtual simulation technology to reconstruct teaching scenarios, the limitations of traditional static curriculum systems in teaching can be overcome. This approach offers "dual-qualified" teachers tools for participation, including communication and collaboration tools, thereby improving the efficiency of collaborative lesson planning and teaching practices. For instance, utilizing digital platforms to simulate real enterprise production processes can transform theoretical teaching into situated skill training, enhancing students' practical abilities. The introduction of project-based learning methods can drive the evaluation system to shift from "theoretical assessment" to "practice-oriented outcomes." Such reforms not only facilitate the transition of teacher capabilities from "single-skill" to "cross-disciplinary collaboration" but also lay the foundation for cultivating professional talents with composite capabilities for the industry.

**Breaking through the Triple Dilemmas: Systematic Reconstruction of the Vocational Education Ecosystem.**

**Innovation in the Educational Arena: From Theoretical Indoctrination to Scenario-Based Teaching.** Traditional vocational education classrooms have long been trapped in the dilemma of

"emphasizing theory while neglecting practice." Vocational education teachers are typically well-versed in theoretical knowledge but often lack practical teaching experience. To overcome this dilemma, teachers' practical experience is indispensable. Therefore, capacity enhancement and experience accumulation can be achieved through leveraging digital tools and deepening school-enterprise cooperation. On the one hand, AI-powered intelligent systems and big data platforms can be utilized to simulate real-world industry scenarios, transforming actual enterprise problems into teaching cases. On the other hand, by deeply engaging in learning at enterprise practice bases, teachers can cultivate their personal practical abilities in authentic enterprise production environments. This enables teachers to apply their existing knowledge and skills to address potential issues that may arise during the teaching process and directly integrate their experiences into the development of teaching resources, thereby breaking through the traditional model of theoretical indoctrination. For instance, teachers can design teaching cases based on actual enterprise needs, guiding students through the entire process from scheme design to project implementation. This approach achieves a profound integration of theory and practice, facilitating effective teacher-student discussions tailored to actual enterprise requirements while inspiring students to contemplate future prospects in light of current enterprise trends.

**Industry Field Deepening: An Innovative Model for School-Enterprise Symbiosis.** Currently, school-enterprise cooperation predominantly remains at superficial levels, such as short-term internship arrangements and the signing of cooperation agreements, making it difficult for teachers to delve into the core business operations of enterprises. Therefore, there is a need to continuously promote an innovative model of bidirectional communication between schools and enterprises. This involves establishing specialized institutions to facilitate communication and collaboration between vocational colleges and enterprises, constructing a new platform for school-enterprise cooperation, and jointly conducting project research. By fully leveraging the advantages of "innovation, professionalism, and synergy" inherent in school-enterprise cooperation, we can support the development of a "dual-qualified" faculty and the cultivation of high-quality technical and skilled talents (Li, Jiang, et al., 2023). For instance, full-time teachers can be encouraged to participate in enterprise-funded research projects, transforming the outcomes into teaching modules to form an ecological chain of deep integration between industry and education. With the bond of shared interests, a cooperative community featuring bidirectional communication between schools and enterprises can be forged. Various measures should be taken to support enterprise staff in serving as part-time teachers at vocational colleges or to guide in-service teachers to engage in practical teaching at enterprises. Through bidirectional interactions, a regular collaborative mechanism between teachers and enterprise experts can be established, achieving substantive breakthroughs in school-enterprise cooperation.

**Embedding Ethical Responsibilities: Cultivating Compassionate Vocational Talents.** "Dual-qualified" teachers should place emphasis on integrating professional ethics, the spirit of labor, the spirit of model workers, and the spirit of craftsmanship into curriculum instruction, and organically incorporate ideological and political work throughout the entire teaching process (Yin, 2025). In the current vocational education system, which is predominantly driven by technological rationality, there has been a long-standing absence of vocational ethics education. This has led teachers, when imparting knowledge, to prioritize skill development and academic performance while neglecting ethical considerations. Consequently, in the process of education and teaching, teachers should not only focus on students' course learning and skill acquisition but also guide them in professional

skills courses to become high-quality labor talents with both competence and ethical qualities. By integrating professional ethics and the spirit of craftsmanship into curriculum instruction, teachers can steer students towards transforming from "mere skill operators" to "responsible practitioners." This can be achieved by embedding ethical topics such as "green manufacturing" and "data security" into professional courses and reinforcing students' professional values and ethical responsibilities through the discussion of controversial cases.

**Future Mission: Iteration of Dynamic Capabilities and Guarantee of Ecological Synergy.**

**Capability Iteration: The "Hexagon Warrior" for Coping with Industrial Transformations.** Driven by the dual forces of digital transformation and intelligent upgrading, digital and intelligent technologies are profoundly reshaping the ecosystem of vocational education, bringing about significant changes in learning environments, knowledge production models, and teaching modalities. Guided by the new development philosophy, the industry skills of "dual-qualified" teachers should transcend the basic requirement of merely "possessing" such skills. Instead, they should follow a policy orientation of hierarchical construction, a goal orientation of lifelong development, and an outcome orientation of radiating leadership, gradually forming a pattern that runs parallel with teaching skills (Liu, Jin et al., 2025). Dual-qualified teachers should continuously adapt to the inherent requirements of evolving social production demands, promoting their personal professional practical abilities with the concept of lifelong development, and striving to upgrade from being "holders of dual certificates" to becoming "hexagon warriors" who possess not only professional knowledge and technical skills but also enterprise practice experience, innovation capabilities, research capabilities, and an international perspective.

**Identity Reconstruction: From "Dual-Certificate Possession" to "Dual-Certificate Identity".** Identity recognition serves as a prerequisite for dual-qualified teachers to realize their subjective value (Dai, 2017). As professional teachers with dual identities within the vocational education context, dual-qualified teachers possess a unique understanding and perception of their own identity, which distinguishes them from ordinary academic subject teachers. This specific group faces significant challenges regarding their professional values and sense of belonging to their occupation. Only when they develop a reasonable sense of identity towards themselves can the subjectivity of their participation in educational reform be acknowledged. Only then can they consciously reflect their characteristics as dual-qualified teachers in the selection of teaching designs and methodologies, and provide more meticulous attention to the cultivation of students' professional literacy and technical skills.

**Long-term Support Mechanism: Collaborative Empowerment through Policies and Institutions.** To ensure the sustainable development of "dual-qualified" teachers, a multi-level support system needs to be established. At the policy level, it is imperative to expedite the formulation of professional standards for "dual-qualified" teachers, meticulously and scientifically regulating the requirements for their professional competencies, and clearly defining the teaching capabilities and requirements specific to different disciplines. Moreover, regions should establish targeted and valuable teacher indicator systems based on their actual conditions in teacher team construction. In the process of optimizing incentive mechanisms, institutions need to facilitate the transition of the assessment system from rigid constraints to developmental incentives, fully leveraging the guiding function of performance evaluation. By enhancing teachers' sense of self-efficacy, their endogenous motivation for development can be stimulated, while relying on exemplary teachers to continuously drive the overall advancement of the teaching faculty.

Ultimately, a synergistic development mechanism integrating policy guidance, institutional empowerment, and teacher autonomy should be formed, creating a sustainable driving force system for enhancing the quality of vocational education.

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The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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