

# ***Study on Developing "Dual-Teacher and Dual-Capacity" Faculty of Vocational Colleges in China***

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**Abstract:** The "dual-teacher, dual-capability" model proposed by the Ministry of Education is an effective approach to addressing the current lack of practical skills among teaching staff in China's vocational education. However, in the process of implementing this transformation, several obstacles remain, including outdated teacher management concepts, rigid management systems, inadequate talent development mechanisms, and issues related to the structure and capabilities of the teaching workforce. Considering these challenges, the leadership of vocational institutions needs to modernize teacher management concepts, establish a comprehensive talent recruitment system, improve talent development frameworks, and implement appropriate incentives to facilitate the successful transition towards a "dual-teacher, dual-capability" teaching force.

## **1. Introduction**

Following the Industrial Revolution, the demand for standardized mass production necessitated that vocational education institutions align their talent development with the needs of industry. As a result, vocational education systems have progressively integrated their curriculum content and teaching standards with industry regulations and production standards to better meet the demands of the labor market. However, the misalignment between the evolution of educational systems and industrial developments has led to a disconnect between current talent cultivation practices and societal needs. The operational standards employed in educational systems tend to be rigid and inflexible, making it difficult to keep pace with the dynamic changes and requirements of enterprises. Teachers play a crucial role as educators and mentors in the development of students' knowledge and skills. Nevertheless, current research indicates that most teachers excel in theoretical instruction but lack practical skills, limiting students' ability to effectively navigate the opportunities and challenges of real-world industrial practice [1]. The once-aligned production and educational standards have now diverged, giving rise to a series of conflicts and contradictions as society continues to evolve. Developing a cohort of high-quality educators who can meet the comprehensive needs of both higher education institutions and industry has therefore become a critical issue in the teacher education system [2].

Based on Japan's model of cultivating "dual-qualification" teachers, the Ministry of Education in China issued the "Guiding Opinions on Encouraging Some Local Regular Undergraduate Institutions to Transform into Application-Oriented Institutions" in 2015, emphasizing the need to strengthen the development of a "dual-teacher, dual-capability" teaching workforce to address the disconnect between talent development and societal needs [3]. In Japan, dual-qualification teachers are required to undergo one year of practical training in relevant enterprises before taking up teaching roles in vocational institutions. The aim is to enhance their operational skills, familiarize them with industry standards, and align teaching content with the actual needs of enterprises, thereby optimizing educational content and better-preparing teachers to meet societal demands [4]. Beyond Japan, Germany's vocational education system is renowned for its "dual system," which emphasizes practical training, with teachers alternating between roles in enterprises and educational institutions to ensure continuous skill enhancement and innovation in teaching methods. Similarly, Australia's vocational education system maintains a rigorous qualification certification process to ensure that teachers possess solid practical experience and teaching capabilities.

The concept of the "dual-teacher, dual-capability" model proposed in China is an advancement and deepening of the traditional "dual-qualification" teacher framework, requiring not only dual experiences and dual titles but also dual competencies or dual qualities. According to Chen Zhenlong, the requirements for "dual-teacher, dual-capability" instructors can be articulated in three main aspects: First, dual experiences, which refer to the expectation that teachers engaged in vocational education should have practical experience in relevant enterprise positions that are closely aligned with their teaching content. The production processes in enterprises and the teaching processes in vocational education institutions are two independent systems; thus, the integration of theoretical knowledge with practical skills is essential for the development of comprehensive competencies. Secondly, dual competencies, mean that teachers must possess strong teaching-related abilities as well as practical operational skills. The teachers' knowledge system serves as the foundation, while teaching-related abilities act as the channel. The possession of dual competencies enables the efficient integration of knowledge with practice. Thirdly, dual certifications, where a teacher's competencies and qualifications must be recognized through standardized certifications in both the education sector and the industrial sector. The certification in education is represented by professional titles, while in the industrial sector, it is demonstrated through vocational skill certificates [5].

Strengthening the development of "dual-teacher, dual-capability" educators holds significant practical importance, as it can elevate the quality of talent development in vocational education, ensuring alignment with the evolving demands of society and fostering closer integration between education and industry [6]. This enables them to better analyze, adapt, and integrate theoretical knowledge with practical applications, thereby enhancing their ability to effectively guide students and develop critical thinking [7]. The proposal to train such educators addresses the prevalent issue of the disconnect between the educational and industrial systems in vocational education. However, many vocational institutions have yet to fully recognize the value of the "dual-teacher, dual-capability" model, and they often lack the necessary shifts in teaching and management practices. This failure to integrate theoretical learning with practical experience among teachers remains a major obstacle to implementing this solution effectively.

## **2. Key Issues in the Development of a "Dual-Teacher, Dual-Capability" Teaching Workforce**

### **2.1. Outdated Management Concepts**

The leadership of vocational institutions must have a profound understanding of the value and role of "dual-teacher, dual-capability" educators, actively promoting and advancing the

development of relevant initiatives [8]. However, traditional teaching management concepts have, to some extent, hindered the progress of building a "dual-teacher, dual-capability" workforce. Within the conventional management mindset of vocational institutions, educational qualifications are often prioritized over practical skills, which creates several barriers to the development of the teaching faculty. Firstly, teachers with higher academic qualifications are often reluctant to engage in frontline production practice activities. This reluctance arises from the perception that frontline roles are typically viewed as lower-level positions, generally assumed to be filled by individuals with less formal education and limited professional experience. As a result, educators in vocational institutions with advanced qualifications frequently experience a significant disconnect between their skills and practical industry requirements, failing to keep pace with the evolving demands of modern production. This gap also leads to a situation where individuals with higher educational credentials often lack industry skill certifications, while those with advanced certifications tend to lack formal academic qualifications. Secondly, challenges emerge during the recruitment process. School administrators tend to favor candidates with high academic credentials over those with extensive industry experience. While candidates with higher academic qualifications possess robust theoretical knowledge and teaching abilities, they often lack hands-on practical experience. Conversely, teachers with considerable industry experience frequently lack formal teaching skills due to the misalignment between academic qualifications and industry certifications. Thirdly, in evaluations or professional title assessments, teaching and research activities are more straightforward and quantifiable, making them easier to assess compared to practical skills, which lack a standardized evaluation system. Consequently, many teachers tend to focus more on research and teaching, often neglecting the importance of developing practical skills.

## 2.2. Rigid Management Systems

Firstly, the recruitment system in higher education institutions is overly rigid. The appointment and promotion processes for "dual-teacher, dual-capability" educators typically involve strict qualification reviews, including requirements for teaching experience, academic credentials, and professional certification. While these standards ensure a baseline level of quality among the teaching staff, their inflexibility can also hinder the inclusion of professionals with practical teaching abilities and industry experience. A 2022 survey of 50 vocational institutions across the country revealed that over 70% of teachers believe the current recruitment system poses a barrier to industry experts with practical skills joining the teaching workforce. Secondly, the compensation system is also inflexible. "Dual-teacher, dual-capability" educators often struggle to receive competitive salaries. Teacher salaries and career progression are usually linked to traditional academic achievements, such as publications and teaching hours, with little recognition or reward for actual teaching quality or improvements in students' skills. Pursuing additional professional skill development and certification requires a significant investment of time and effort, which can detract from teaching and research activities. In many vocational institutions, salary levels are primarily determined by academic rank, and professional skill certifications do not lead to salary increases but may even negatively impact career progression. This lack of financial incentive discourages teachers from pursuing practical skill development. Thirdly, the teaching management systems are rigid. The current management frameworks in most vocational institutions remain traditional and are not aligned with the developmental needs of "dual-teacher, dual-capability" educators. Traditional teaching evaluation and supervision systems mainly focus on criteria such as teaching materials, teaching processes, research achievements, and student evaluations. For "dual-teacher, dual-capability" educators, however, assessments related to professional skills should be given equal importance, yet these aspects are often overlooked. In many vocational institutions, teachers'

career development paths and teaching methods are still tightly controlled by administrative guidelines, with little respect for or support for teachers' autonomy. Administrators often emphasize standardized management practices at the expense of recognizing teachers' independence and creativity in teaching and practice. This restrictive management approach diminishes teachers' motivation to enhance their practical skills and develop innovative teaching methods, ultimately limiting the flexibility and diversity in cultivating "dual-teacher, dual-capability" educators.

### 2.3. Inadequate Talent Development Mechanisms

Given the current talent recruitment mechanisms, providing practical skill training to newly recruited individuals with advanced academic qualifications to achieve "dual capabilities" and "dual certifications" appears to be a feasible approach. However, there is a significant lack of structured management systems in this area. In China, vocational teachers are not uniformly required to undergo a set period of vocational skills training before taking up teaching positions. Some vocational institutions independently encourage and arrange for teachers to participate in training at enterprises, yet the lack of effective oversight and management often results in these training activities becoming mere formalities. As enterprises continuously innovate and adapt their production processes, close communication and regular exchanges between educational institutions and enterprises, along with rational talent mobility, are essential. However, there is still considerable room for improvement in the collaboration between vocational institutions and industry partners. Moreover, there are misconceptions among teachers regarding the concept of "dual-teacher, dual-capability." Many limit their understanding to achieving "dual certifications," believing that obtaining academic titles and vocational skill certificates suffices. This narrow perception severely impedes teachers' ability to meet practical demands, resulting in superficial attainment of "dual-teacher" status without achieving true "dual capabilities." From the institutional perspective, when encouraging teachers to pursue further development, there is a tendency to promote higher academic degrees rather than hands-on training in enterprises, which runs counter to the core philosophy of "dual-teacher, dual-capability."

Beyond the lack of structured policies and practical training, the pathways for talent development in teaching are often singular and lack diversity. Vocational institutions tend to rely excessively on a single development approach, typically focusing on theoretical instruction or basic practical training while neglecting more varied forms of teacher development. Career development paths for teachers are often rigid, lacking flexibility and individualized options. This one-size-fits-all approach fails to meet the diverse needs of teachers at different stages of their professional development, particularly those seeking to balance teaching, research, and industry practice. The design of talent development mechanisms often overlooks the importance of catering to teachers' individual growth needs. Additionally, there is a lack of systematic career development planning and support. In many vocational institutions, teachers' professional growth lacks coherent and forward-looking planning, which means that when they face career obstacles—such as opportunities for further training, promotion, or research support—they cannot access timely and effective assistance. This situation often leaves teachers in a passive state, hindering their ability to proactively seek career advancement, thereby limiting the effectiveness of talent development mechanisms. Finally, there is insufficient innovation in the talent development mechanisms, as evidenced by outdated training content and methods, uniform teaching models, and slow adoption of emerging technologies. Teacher development content is primarily based on traditional teaching methods and industry standards, with little integration of innovative practices or cutting-edge technologies.

## 2.4. Issues in Teacher Structure and Competency

As previously mentioned, vocational institutions face certain challenges in talent recruitment, as the available candidates often do not meet the criteria for "dual-teacher, dual-capability" qualifications. This means that candidates frequently lack a balanced knowledge structure, forcing institutions to choose between those with academic qualifications or practical skills. Teachers with higher academic credentials typically focus on theoretical knowledge and research skills during their education, leaving them with limited time and opportunities to engage in hands-on production practices. While this educational background may satisfy academic requirements, it often results in a significant skills gap. Additionally, individuals seeking positions in educational institutions often undervalue practical skill experience and positions, viewing them as low-level labor. This perception reduces their motivation and enthusiasm for further training or development in practical skills. Given the lack of practical skills among full-time teachers, many institutions opt to hire part-time external instructors to bridge this gap. External instructors are favored for their advanced technical expertise or vocational skills, which align well with the needs of vocational institutions. However, it is undeniable that individuals focused on practical skills often neglect systematic theoretical knowledge and lack experience or training in educational methodologies. Moreover, the rapid development and evolution of production technology in industries contrast with the relatively outdated knowledge frameworks in educational institutions. External instructors, while well-versed in current industry practices, tend to base their teaching on these production standards. Consequently, this approach may lead to inconsistencies with the established curriculum or educational requirements when external instructors deliver their lessons.

## 3. Strategies for Developing a "Dual-Teacher, Dual-Capability" Teaching Workforce

### 3.1. Updating Teacher Management Concepts

The management should begin by enhancing awareness through specialized training and seminars for school leaders and administrators, enabling them to fully understand the critical role of "dual-teacher, dual-capability" educators in improving teaching quality, promoting student employability, and contributing to social services. This should be accompanied by the promotion of a competency-based educational philosophy that emphasizes the integration of knowledge and practice. Organizing lectures, training sessions, and workshops can help gradually shift traditional mindsets within the institution, fostering a greater appreciation for practical skills and applied abilities. Secondly, the strategic importance of "dual-teacher, dual-capability" educators should be clearly defined. The management should integrate the development of these educators into the overall strategic plan of the institution, recognizing them as a vital component of talent cultivation and the enhancement of educational quality. Lastly, the management should establish specific goals for the development of "dual-teacher, dual-capability" educators, including clearly defined objectives and implementation plans. It is essential to outline policies and resource allocations related to these educators in school-level decision-making processes. Strengthening collaboration with industries through joint training programs, practical industry placements, and other initiatives can help enhance teachers' practical skills and understanding of the sector. Institutions should actively encourage and support teachers to engage regularly in industry practice, participate in projects, and update their knowledge and skills in line with industry developments. Although updating management concepts is crucial for advancing the development of "dual-teacher, dual-capability" educators, practical implementation may encounter resistance due to traditional views held by administrators and reluctance from the teaching staff. To address this, institutions can adopt a "gradual" reform strategy by initiating pilot projects in select departments before expanding the



reforms across the institution based on feedback. Establishing a feedback mechanism is also essential, allowing for the collection of regular input from teachers and the adjustment of strategies based on this feedback to ensure the smooth progression of the reforms.

### 3.2. Improving Talent Recruitment Systems

The robust development of the teaching workforce is a crucial safeguard for achieving talent cultivation objectives. In the future, vocational institutions will require a significant number of professionals who meet the "dual-teacher, dual-capability" standards. Effectively recruiting these qualified educators is a critical issue for educational management departments and plays a key role in the growth of the institutions. During the recruitment process, it is essential to strictly adhere to the requirements of "dual-teacher, dual-capability" standards, refine the relevant recruitment procedures, and broaden the channels for talent acquisition. For instance, the traditional approach of selecting candidates solely based on their theoretical knowledge and academic background should be avoided. Instead, emphasis should also be placed on evaluating candidates' industry experience and practical skills. Where candidates are equally qualified, the most suitable choice should be made based on the specific talent needs of the institution. In terms of recruitment channels, institutions should move beyond the conventional practice of limiting recruitment to academia. They should explore various avenues such as online job portals and direct recruitment from enterprises to attract candidates who meet the "dual-teacher, dual-capability" criteria and are willing to work in vocational education. Vocational institutions might also consider establishing cross-industry talent-sharing mechanisms by forming long-term collaborations with relevant sectors. This approach could facilitate the flexible allocation of industry experts through talent-sharing platforms, enhancing both the practical experience of educators and the reciprocal exchange of knowledge and technology between industry and academia. To address the geographical limitations that vocational institutions face in attracting top-tier talent, institutions could consider implementing a regional talent collaboration mechanism. By partnering with other institutions and industry organizations within the region, they could share high-calibre talent resources and overcome the limitations imposed by the constraints of individual institutions. For example, several vocational institutions within the region could jointly recruit high-level "dual-teacher, dual-capability" professionals and utilize strategies like job rotation and cross-campus teaching to maximize the impact of these experts.

### 3.3. Enhancing Talent Development Systems

Building on the existing teaching staff is a crucial strategy for most vocational institutions to facilitate the transition of their workforce towards the "dual-teacher, dual-capability" model. Given the current deficiency in practical skills among educators, it is essential to strengthen collaborations between schools and enterprises, providing teachers with platforms and opportunities to enhance their operational skills. Institutions should encourage teachers to utilize their free time, such as during winter and summer breaks, to engage in professional placements in relevant positions within enterprises [9]. This initiative allows institutions to align their teaching content and requirements with industry standards, thereby enhancing the practical skills of educators. In return, enterprises can leverage the strong theoretical expertise of institutional faculty to refine and standardize their production processes. Additionally, institutions should establish a robust support system for "dual-teacher, dual-capability" educators, such as developing a mentorship program that pairs newly hired teachers with experienced mentors to guide teaching, research, and practical skills. In terms of resource support, it is vital to provide the necessary teaching resources, laboratory equipment, and research funding to facilitate teachers' smooth progression in both teaching and practice. While

focusing on the enhancement of full-time teachers' practical skills, it is equally important to strengthen the theoretical knowledge, educational skills, and teaching methodologies of part-time instructors. Institutions can organize concentrated learning and training sessions on educational theory and teaching skills for part-time faculty members during their free time. Modern teaching tools, such as micro-courses, can be employed to train their teaching abilities, helping them understand that beyond knowledge transmission, the teaching process also involves complex psychological phenomena and educational principles. This approach aims to elevate part-time instructors' teaching competencies. Throughout the talent development process, institutions should ensure effective supervision, evaluation, and management to prevent training and learning activities from becoming mere formalities. The goal is to genuinely enhance the quality of the teaching staff through comprehensive training and learning, thereby meeting the requirements of the "dual-teacher, dual-capability" model.

### **3.4. Enhancing the Incentive System for "Dual-Teacher, Dual-Capability" Educators**

Incentives play a crucial role in driving behavior. Beyond the measures and institutional support, vocational institutions should establish and refine the incentive system for "dual-teacher, dual-capability" educators, reforming performance evaluation methods to raise awareness of the importance of "dual certifications" and "dual capabilities" among teachers, encouraging them to voluntarily pursue this transformation [10]. Firstly, the evaluation system should be revised. In the context of integrating education with industry, teacher evaluations should place equal emphasis on both teaching and practical skills. In the teaching domain, assessments should focus on the quality of instruction, the teaching process, and related teaching materials. In terms of practical skills, the evaluation should consider teachers' participation in enterprise practices, their effectiveness in guiding students' practical training, and their involvement in directing students in various vocational skills competitions. Additionally, the evaluation should include teachers' research on professional skills or applied technologies, the conversion of these findings into practical outcomes, and their impact. This balanced evaluation of teaching and practical skills serves as a crucial guideline for enhancing teachers' understanding of the "dual-teacher, dual-capability" model. Secondly, institutions should adjust their compensation systems to favor "dual-teacher, dual-capability" educators by providing performance-based rewards or additional allowances to those meeting the model's criteria. Thirdly, teachers who fulfill the "dual-teacher, dual-capability" requirements should receive not only additional merit points but also priority consideration for promotions, awards, and end-of-year evaluations when they are otherwise equally qualified [11]. Beyond material incentives, recognizing the importance of non-material rewards and enhancing professional prestige is also vital in creating an effective incentive system for "dual-teacher, dual-capability" educators. Vocational institutions can collaborate with industry associations to nominate outstanding "dual-teacher, dual-capability" educators for prestigious titles such as industry leaders or national master craftsmen, helping them build authority both within and outside the field and enhancing their professional reputation. Additionally, institutions can encourage educators to participate in international exchanges, regularly sharing experiences with frontline experts, learning advanced vocational development models and teaching methods from abroad, and supporting their presentation of practical achievements on international platforms through reward mechanisms. Lastly, institutions should establish a continuous improvement mechanism for the incentive system to ensure its sustainability and adaptability. Schools should regularly gather feedback from teachers on the existing incentive measures through surveys, focus groups, and other methods to understand their genuine perceptions and evolving needs. Based on this feedback, schools should promptly adjust and optimize incentive policies to align them with teachers' development goals and the

dynamic changes in the industry.

#### 4. Conclusions

Building a teaching workforce that meets talent development needs is the fundamental guarantee for achieving educational objectives. Developing a "dual-teacher, dual-capability" workforce is an effective strategy for addressing the challenges in China's vocational education system. This endeavor requires a comprehensive understanding of the "dual-teacher, dual-capability" concept from both the management and teaching staff, along with proactive efforts in its practical implementation to drive multiple initiatives aimed at improving the overall quality of the teaching faculty. Vocational institutions should explore more flexible teacher development models to adapt to rapidly changing societal demands. Furthermore, policymakers should increase support for vocational education by creating favorable policy frameworks and providing the necessary resources to ensure the steady advancement of the "dual-teacher, dual-capability" teaching workforce.

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