

Research on Cultivation of “Double Teachers and Three Abilities” Teacher Team in Vocational Undergraduate Education from the Perspective of Craftsmanship Spirit

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Abstract: Against the backdrop of high-quality vocational education development and new-type productive capacity building, the craftsmanship spirit has emerged as a core value guide for the connotative construction of vocational undergraduate education. The “dual-qualified triple-skilled” faculty team, serving as the cornerstone of talent cultivation in vocational undergraduate programs, directly determines educational quality through their professional competence, ethical standards, practical skills, and innovative mindset. This study examines the intrinsic alignment between craftsmanship spirit and “dual-qualified triple-skilled” teachers from a value perspective aligned with vocational undergraduate education positioning. It analyzes current deficiencies in faculty development regarding craftsmanship ethos, professional expertise, practical innovation capabilities, and pedagogical dedication. By establishing implementation pathways through five dimensions—value guidance, training systems, practical platforms, evaluation mechanisms, and cultural ecosystems—the research proposes strategies for integrating craftsmanship spirit into faculty development. These findings provide theoretical references and practical models for vocational colleges to cultivate high-caliber teaching teams characterized by firm convictions, moral integrity, solid academic expertise, compassionate attitudes, and comprehensive competencies in instruction, practice, and innovation.

Keywords: Craftsmanship spirit; Vocational undergraduate education; Dual-qualified and triple-skilled teachers; Faculty team; Teacher training program

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1. Introduction

With the continuous improvement of China’s modern vocational education system, vocational undergraduate education has entered a phase of large-scale, standardized, and high-quality development. Vocational undergraduate programs aim primarily to cultivate high-level technical and skilled professionals, emphasizing the integration of theoretical knowledge, practical skills, and innovative capabilities, thereby imposing higher demands on faculty members. The “Dual Competencies and Three Abilities” (dual professional qualities, proficiency in teaching, practical application, and innovation) have become the core standard for vocational undergraduate instructors. Meanwhile, the state places

great emphasis on fostering the spirit of craftsmanship; the National Vocational Education Reform Implementation Plan explicitly calls for integrating this spirit into the entire educational process to guide both teachers and students in pursuing excellence and continuous improvement^[1].

Currently, some vocational undergraduate institutions have evolved from higher vocational colleges. Their faculty teams commonly exhibit issues such as overemphasizing academic credentials over practical skills, prioritizing theory over practice, focusing on teaching methods rather than innovation, and concentrating on knowledge transmission while neglecting craftsmanship cultivation. The integration of craftsmanship spirit remains insufficient, and the “dual-qualified triple-skilled” teacher development initiative has become superficial, failing to effectively support the training of high-level technical professionals. Therefore, systematically advancing the cultivation of “dual-qualified triple-skilled” faculty teams from the perspective of craftsmanship spirit is not only an essential requirement for the substantive development of vocational undergraduate education, but also a strategic measure to fulfill the fundamental mission of moral education and serve industrial upgrading^[2].

2. Core Concepts and Internal Logic

2.1. Definition of Core Concepts

The spirit of craftsmanship is a professional ethos characterized by the pursuit of excellence, relentless refinement, steadfast dedication, innovative creativity, and commitment to integrity. It encompasses six core principles: professionalism, precision, focus, innovation, responsibility, and nurturing talent with craftsmanship—a defining essence and foundational value of vocational education^[3].

Dual-qualified and Three-Skill Vocational College Teachers: Dual-qualified refers to educators who hold both teaching credentials and industry certifications or possess frontline corporate experience, combining pedagogical expertise with practical skills. Three-Skill Proficiency includes: 1) Teaching Competence: Capable of curriculum development, instructional design, practical training guidance, digital teaching methodologies, and student performance assessment; 2) Practical Skills: Proficient in equipment operation, process optimization, project implementation, and on-site technical problem-solving; 3) Innovative Capabilities: Engaged in technology R&D, commercialization of research outcomes, teaching innovation, and industry service provision.

2.2. The Intrinsic Compatibility Between the Craftsmanship Spirit and “Dual-qualified, Three-Skill” Teachers

The craftsmanship spirit and the cultivation of “dual-qualified, multi-skilled” teachers exhibit profound value alignment, shared objectives, and complementary content. Firstly, professional dedication forms the professional foundation for these educators, requiring them to uphold educational principles, embrace vocational education, and devote themselves to teaching and nurturing students. Secondly, excellence-oriented qualities represent their professional pursuit, driving teachers to strive for perfection in teaching, practice, and innovation. Thirdly, persistent commitment serves as the growth cornerstone, motivating educators to deepen expertise, engage in continuous learning, and maintain long-term dedication. Fourthly, innovative creativity constitutes their core competency, demanding teachers to stay abreast of technological advancements and foster dual innovation in pedagogy and technology. Fifthly, ethical education embodies their mission, emphasizing moral integrity in personal conduct, academic pursuits, and teaching practices while transmitting craftsmanship spirit to students. Essentially, the craftsmanship spirit provides value guidance for building “dual-qualified, multi-skilled” teacher teams, while such teams serve as practical vehicles for implementing craftsmanship principles. These two elements mutually reinforce each other, synergistically supporting the high-quality development of vocational undergraduate education^[4].

3. Issues in the Development of Vocational Undergraduate Faculty from the Perspective of the Craftsmanship Spirit

3.1. Insufficient value guidance of craftsmanship spirit and weak professional identity

Some educators lack a deep understanding of vocational education's fundamental role and fail to recognize or embrace the spirit of craftsmanship. They exhibit tendencies of "prioritizing teaching over nurturing students" and "emphasizing technical skills while neglecting character development," demonstrating insufficient dedication, accountability, and educational commitment. This makes them ill-equipped to serve as effective inheritors and role models of students' craftsmanship ethos. The dual-qualification structure among teachers remains flawed, with inadequate practical craftsmanship experience. Most instructors are fresh graduates lacking industry experience, resulting in a disconnect between their practical skills and industrial demands. Even those holding dual certifications often lack real-world project experience, struggling with hands-on proficiency, technical expertise, and problem-solving capabilities—failing to embody the meticulous craftsmanship ethos.

3.2. Imbalanced development of the "three capabilities" with weak innovation capacity

The development of teaching competence, practical skills, and innovative capabilities remains unbalanced. While most educators excel in theoretical instruction, they often lack proficiency in hands-on training guidance, technological R&D, and commercialization of research outcomes. Their adaptation to emerging technologies, processes, and equipment remains sluggish, coupled with insufficient innovation awareness and motivation, as well as a deficiency in craftsmanship-oriented innovation spirit. The talent cultivation system suffers from fragmentation, with craftsmanship ethos being superficially integrated. Teacher training primarily focuses on theoretical education and academic credential upgrades, lacking immersive, practice-based, and experiential learning approaches. Corporate internships often become superficial formalities, leaving students isolated from core technologies and production workflows. The craftsmanship spirit has yet to be systematically incorporated into the entire training, evaluation, and incentive mechanisms, resulting in unsustainable educational outcomes^[5].

3.3. The evaluation and incentive mechanisms are outdated, resulting in weak guiding effectiveness.

The evaluation and promotion of professional titles, as well as performance assessments, still primarily rely on academic publications, research projects, and educational qualifications, while paying insufficient attention to craftsmanship ethos, practical achievements, technical services, and educational outcomes. Teachers lack institutional incentives to embrace craftsmanship principles and enhance practical innovation capabilities, resulting in inadequate intrinsic motivation. The cultural ecosystem remains underdeveloped, with a weak atmosphere of craftsmanship and inadequate integration of campus culture, professional culture, and industrial culture. The prevailing culture that values skills, respects craftsmen, and pursues excellence lacks depth. The absence of master mentors, exemplary models, and role models makes it challenging for teachers to naturally cultivate craftsmanship spirit through subtle influence^[6].

4. Overall Approach to Cultivating a "Dual-qualified and Trifaceted Competent" Teacher Team from the Perspective of Craftsmanship Spirit

With fostering virtue and nurturing talents as the foundation, the spirit of craftsmanship as the core value, and the "dual-qualified, multi-skilled" competency goal, we adhere to the principles of "value guidance, competency prioritization, practice empowerment, and cultural immersion" to establish a tripartite training system for "cultivating craftsmanship, enhancing professional competence, and nurturing talent." Cultivating Craftsmanship: Strengthening dedication, precision, focus, innovation, and a sense of responsibility to shape teachers' professional character; Enhancing Professional Competence: Improving core capabilities in teaching, practice, and innovation to solidify professional expertise; Nurturing Talent: Building a high-caliber teaching faculty characterized by noble ethics, exceptional skills, a balance between full-

time and part-time roles, and vibrant dynamism. Through coordinated efforts in philosophy, systems, platforms, and culture, we achieve deep integration of the spirit of craftsmanship throughout the entire teacher development process.

5. Cultivation Path of “Dual-qualified and Triple-skilled” Faculty for Vocational Undergraduate Programs from the Perspective of Craftsmanship Spirit

5.1. Soul-Casting Education: Guiding Teacher Value Formation with Craftsmanship Spirit

We will strengthen teacher ethics and craftsmanship education by integrating the spirit of craftsmanship into core components of teacher induction training, annual professional development programs, and ethical education initiatives. Specialized workshops on the spirit of model workers, labor dedication, and artisan excellence will be conducted, featuring lectures by master artisans, industry experts, and outstanding educators to inspire teachers to embrace the conviction that “dedication to teaching contributes to national strength.” Adhering to the principle of fostering virtue through education and nurturing talents with craftsmanship, we will encourage teachers to incorporate this spirit into curriculum objectives, instructional designs, practical training guidance, and daily management practices. Through leading by example—demonstrating professional commitment, rigorous standards, and focused dedication—we aim to harmonize knowledge transmission, skill development, and value cultivation. By recognizing exemplary models such as “Craftsmanship Teachers,” “Dual-Skill Pioneers,” and “Educational Role Models,” and publicizing their achievements, we will amplify their influence to foster an environment of mutual learning, competition, and continuous excellence.

5.2. Competency Empowerment: Building a Precision Training System with “Three-Skill Synergy”

Teaching Competence: Develop lean teaching capabilities through a craftsman spirit-driven capacity-building program. Encourage teachers to create modular textbooks, project-based curricula, and structured modules, while implementing case studies, scenario-based learning, and task-oriented instruction. Enhance instructional design skills, classroom management expertise, practical training guidance, and digital teaching proficiency to achieve precise teaching processes, refined content delivery, and optimized learning outcomes. **Practical Skills:** Strengthen professional expertise by establishing long-term industry partnerships. Require new faculty members to complete on-the-job training in enterprises, with mid-career and junior teachers conducting annual enterprise internships lasting at least one month. Engage in frontline production environments, technical roles, and project sites to master advanced technologies, equipment, and methodologies. Develop hands-on operational skills, process optimization capabilities, and problem-solving competencies to cultivate artisan-level craftsmanship. **Innovation Capacity:** Foster creative thinking through faculty participation in R&D initiatives, collaborative projects, patent applications, and technology commercialization. Encourage integration of industry innovations and corporate projects into teaching materials to bridge academic research with technological advancement. Cultivate an innovative craftsman ethos characterized by bold experimentation, breakthrough-driven approaches, and continuous improvement.

5.3. Integration of Industry and Education: Establishing a Platform for Craftsmanship Practice and Growth

We collaborate to establish industry-academy partnerships and artisan studios, inviting corporate experts, technical specialists, and faculty members to co-create master workshops, innovation centers, and field engineering academies. Through apprenticeship programs and project-based training models, educators cultivate craftsmanship expertise through real-world projects and practical scenarios. Implementing mutual faculty appointments and two-way mobility initiatives, we introduce “industry professors” and “corporate mentors” systems that facilitate corporate artisans’ campus engagement and faculty industry immersion. This fosters talent exchange, resource sharing, and complementary competencies while immersing educators in industrial culture and artisanal ethos. By creating skill competitions and teaching contests, we leverage competition-driven practice to refine teaching methodologies and technical proficiency. Faculty participation in vocational skills competitions, pedagogical excellence contests, and technological innovation challenges cultivates a

commitment to excellence through competitive challenges, ultimately enhancing professional capabilities.

5.4. Mechanism Innovation: Improving the Evaluation and Incentive System with Clear Orientation

We will establish a “Craftsmanship + Three Competencies” evaluation system that incorporates craftsmanship ethos, professional ethics, teaching capabilities, practical achievements, innovative outcomes, and educational effectiveness into teacher assessments. The system will prioritize enterprise practice, technical services, project results, and educational impact while addressing the tendency to overemphasize academic publications, degrees, and titles. A differentiated incentive mechanism will be implemented, offering preferential treatment in performance distribution, title evaluations, awards, and promotions to teachers demonstrating craftsmanship spirit, outstanding practical skills, and remarkable innovation achievements. Awards including “Craftsmanship Spirit Recognition,” “Dual-Teacher Contribution Awards,” and “Technological Innovation Awards” will be established to motivate educators. A growth portfolio system and tiered development framework will be introduced, creating “Craftsmanship Growth Portfolios” for teachers. This includes phased training programs for new faculty members, core educators, academic leaders, and top talents, with clear objectives for craftsmanship development and competency enhancement at each stage to ensure continuous professional growth and career advancement^[7].

5.5. Cultural Immersion: Creating an Educational Ecosystem That Emphasizes Craftsmanship

We will cultivate a campus culture centered on the spirit of craftsmanship through initiatives such as a Craftsmanship Culture Corridor, a Skills Culture Festival, a Model Worker Lecture Series, and events inviting corporate artisans to campus. This integrates the spirit of craftsmanship into the campus environment, institutional culture, and behavioral norms, fostering an atmosphere where craftsmanship is evident everywhere and learning from artisans is ongoing. We promote the integration of industrial culture with professional culture by incorporating industry standards, corporate practices, craftsmanship traditions, and quality principles into classrooms, training laboratories, and instructional settings. This allows teachers to be immersed in a professional cultural environment, strengthening their professional identity and commitment to craftsmanship. A mentorship system is implemented, where experienced faculty members and industry masters guide young teachers, transmitting not only technical skills but also a dedicated work ethic, focus, and innovative spirit, ensuring the continuity of craftsmanship across generations.

6. Implementation Support for Training

Organizational Support: A Leading Group for Faculty Development has been established under the leadership of school administrators, involving the Academic Affairs Office, Human Resources Department, secondary colleges, and partner enterprises. This group coordinates planning and collaboratively integrates the craftsman spirit throughout the “Dual-Instructor, Triple-Skill” training program. **Institutional Support:** Systems for faculty industry practice, professional ethics assessment, performance evaluation, title evaluation and appointment, and talent recruitment have been enhanced to institutionalize and sustain the craftsman spirit alongside the “Dual-Instructor, Triple-Skill” requirements. **Financial Support:** Special funds have been allocated for faculty development, craftsman training, industry practice, and incentives, providing stable funding for teacher training, platform development, research projects, and skill enhancement. **Infrastructure Support:** Modern training centers, technological innovation platforms, and master studios have been established, equipped with advanced facilities and digital resources to enhance teachers’ practical and innovative capabilities^[8].

7. Conclusion

As the highest level of modern vocational education, vocational undergraduate education bears the important mission of cultivating high-level technical and skilled talents, inheriting the craftsman spirit, and serving national strategies. A “dual-

qualified, multi-skilled” faculty is crucial for the high-quality development of vocational undergraduate programs, while the craftsman spirit constitutes the spiritual core and value essence of the teaching staff. Deeply integrating the craftsman spirit throughout the entire process of cultivating such faculty members is not only a practical necessity to address current faculty shortages but also an essential path for advancing vocational education toward higher standards, excellence, and distinctive characteristics.

Vocational undergraduate institutions must uphold the principles of nurturing souls through craftsmanship, strengthening foundations with technical expertise, and educating students with artisanal talents. By implementing a “five-in-one” approach encompassing value guidance, competency development, industry-education collaboration, institutional incentives, and cultural immersion, we aim to inspire faculty members to remain committed to their original aspirations, enhance quality through precision, sharpen skills through dedication, and drive progress through innovation. This initiative seeks to build a dynamic teaching team characterized by noble ethics, exceptional skills, and a blend of full-time and part-time educators, embodying the “dual-qualified, triple-skilled” model. Such efforts will provide robust faculty support for cultivating high-caliber technical professionals, master craftsmen, and national artisans, thereby contributing vocational education to the nation’s vision of becoming a powerhouse in education, science and technology, and talent development.

Disclosure statement

The author declares no conflict of interest.

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