

# Research on the Innovation of Industry-Education Integration Model Based on Huang Yanpei Vocational Education Thought

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**Abstract:** Huang Yanpei vocational education thought contains the original concept of industry-education collaboration and work-integrated learning. His educational purpose of “enabling the unemployed to have employment and the employed to enjoy their work”, teaching principle of “using both hands and brain, integrating learning and doing”, socialized school-running policy and great vocational education doctrine provide local theoretical support for solving the current problems of superficial cooperation, disconnection between learning and application, utilitarian education, and weak multi-party collaboration in industry-education integration. Based on the requirements of vocational education reform in the new era, this paper sorts out the core connotation of Huang Yanpei vocational education thought, analyzes the practical dilemmas of industry-education integration at the present stage, constructs an innovative industry-education integration model guided by the four major concepts, and proposes specific implementation paths, aiming to promote deep symbiosis between schools and enterprises, cultivate talents with both morality and skills, promote effective connection between education chain and industrial chain, and provide reference for high-quality development of vocational education.

**Keywords:** Huang Yanpei; Vocational Education Thought; Industry-Education Integration; Model Innovation; School-Enterprise Collaboration

## 1. Introduction

Industry-education integration and school-enterprise cooperation are the core school-running models of vocational education. However, at present, school-enterprise cooperation in most colleges and universities

still remains at a superficial stage, with common problems such as insufficient motivation for enterprise participation, separation of theory and practice, and emphasis on skills over professional literacy [1]. Tracing back to the source of local vocational education, the vocational education thought proposed by Huang Yanpei a century ago, although not directly using the concept of industry-education integration, advocates the integration of work and learning and multi-party collaborative school running, which is highly consistent with the internal logic of modern in-depth industry-education integration [2]. His great vocational education doctrine has important guiding value for solving the current pain points of integration. Against this background, based on Huang Yanpei's vocational education thought as the theoretical foundation, this paper sorts out the core of the thought, comparatively analyzes the existing shortcomings of industry-education integration, and explores the innovative model and implementation strategy of industry-education integration adapted to the development of the new era. It not only realizes the contemporary inheritance and transformation of traditional vocational education thought, but also provides practical ideas for deepening industry-education integration and cultivating high-quality technical and skilled talents.

## 2. Core Connotation of Huang Yanpei Vocational Education Thought and Its Original Logic of Industry-Education Integration

After decades of vocational education practice, absorbing Chinese and foreign educational experience, Huang Yanpei gradually formed a systematic vocational education thought. Its core concepts can be summarized into four sections, each containing the underlying logic of industry-education integration.

## **2.1 Educational Purpose: Enable the Unemployed to Have Employment and the Employed to Enjoy Their Work**

Huang Yanpei condensed the ultimate goal of vocational education as “enabling the unemployed to have employment and the employed to enjoy their work” [3], and simultaneously clarified the four basic missions of vocational education: pursuing individual development, preparing for personal livelihood, preparing for serving society, and preparing for national productivity improvement. “Having employment” points to the adaptability of talent employment, requiring educational content to fit the real needs of industrial posts; “enjoying work” focuses on professional identity and long-term occupational well-being, transcending the level of simple skill training. This purpose determines that industry-education integration cannot only focus on post skill teaching, but must take into account the triple goals of employability, professional literacy, and career development [4].

## **2.2 Teaching Principle: Using Both Hands and Brain, Integrating Learning and Doing**

Huang Yanpei criticized the binary separation problem of “reading without doing hands-on work, working without reading” in traditional old-style education, and established the core teaching principle of “using both hands and brain, integrating learning and doing, unifying knowledge and practice” [5]. He advocated embedding theoretical knowledge into the practice process, learning while doing things, and testing knowledge through practice. He promoted the simultaneous development of classroom teaching and practical work, achieving “reading is working, working is studying”. This concept corresponds to the practical teaching link of modern industry-education integration, requiring breaking the boundary between campus classrooms and enterprise production scenarios, deeply binding curriculum content, teaching process, and training projects with real enterprise production tasks, eliminating formalized training, and realizing “learning while doing, doing while learning”.

## **2.3 School-Running Policy: Socialized School-Running Concept**

Huang Yanpei emphasized: “Vocational education, in essence, is social; in terms of

function, it is socialization” [6]. He proposed that school running must be based on regional social industrial structure, peoples livelihood needs, and industry development dynamics. Vocational colleges cannot run schools in isolation, but should actively connect with industry enterprises, social organizations, and government departments to achieve dynamic matching between education supply and social needs. Socialized school running points out the basic direction of industry-education integration. The specialty setting and curriculum development of vocational colleges must be dynamically adjusted following industrial iteration, establishing normalized school-enterprise communication channels to avoid professional solidification and content lagging behind industry technical standards.

## **2.4 Development Concept: Great Vocational Education Doctrine**

In 1926, Huang Yanpei formally proposed the Great Vocational Education Doctrine [7]. Its core viewpoints include three layers: first, vocational education cannot be limited within vocational schools, requiring multi-subject collaborative efforts from the education circle, industry circle, government, and society; second, vocational education should not only carry out pre-service education for students at school, but also carry out post-service training for on-the-job employees and unemployed people; third, vocational education needs to be integrated into the overall regional social development, taking into account multiple values of economic development, peoples livelihood employment, and social governance. The Great Vocational Education Doctrine breaks through the single two-party cooperation model of schools and enterprises, providing a theoretical basis for constructing an integrated ecology with multi-subject participation including government, colleges, industries, enterprises, and scientific research institutions. It is also the key guiding ideology for solving the current problems of single subject, narrow coverage, and broken education chain in industry-education integration.

## **3. Main Dilemmas Existing in the Current Development of Industry-Education Integration in China**

Combined with the general practice status of industry-education integration in domestic

vocational colleges, and comparing with Huang Yanpei four major vocational education concepts, the following four prominent problems existing in the current integration model are summarized.

### **3.1 Superficial Cooperation Level, Deviating from the Multi-Party Coordination Requirement of “Great Vocational Education Doctrine”**

At present, most industry-education integration is limited to simple two-party cooperation between colleges and enterprises, with weak government overall planning and guidance, missing coordination function of industry associations, and extremely low participation of social organizations, presenting a pattern of “schools taking initiative, enterprises being passive, industries waiting and seeing, and government being absent” [8]. Cooperation forms are mostly student internship, short-term lectures provided by enterprises, and order classes, mainly temporary and project-based cooperation, lacking long-term and stable entity cooperation platforms. This binary superficial cooperation model violates the concept of multi-party linkage and full-domain participation in Huang Yanpei Great Vocational Education Doctrine, making it difficult to form a long-term constraint mechanism. Enterprises generally have problems such as insufficient participation motivation, low investment willingness, and vague education rights and responsibilities.

### **3.2 Utilitarian Talent Cultivation, Deviating from the Dual Educational Purpose of “Having Employment + Enjoying Work”**

Some colleges and universities carry out industry-education integration only with improving employment rate as the single goal, curriculum setting closely focuses on basic post entry skills, compressing humanities literacy and professional ethics courses; during enterprise internship, they focus on basic assembly line operations, only training repetitive operation skills, lacking cultivation of professional spirit and sustainable development ability. The finally trained students can only adapt to low-end basic positions, with weak professional identity and insufficient post transfer ability, which is very prone to short-term employment loss and job burnout. They only achieve the basic goal of “having

employment”, ignoring the deep educational pursuit of “enjoying work” emphasized by Huang Yanpei.

### **3.3 Separation of Knowledge and Practice in Teaching Process, Failing to Implement the Principle of “Using Both Hands and Brain, Integrating Learning and Doing”**

Campus courses are still dominated by theoretical classroom teaching, and training courses mostly adopt simulation projects, which have gaps with real enterprise production scenarios; internship often appears “sheep-herding” management, imperfect student sharing mechanism, lack of standardized system for teacher mutual employment and curriculum co-construction; unclear assessment and evaluation mechanism, vague division of rights, benefits and risks between schools and enterprises, lack of institutional guarantee for long-term cooperation; insufficient connection between pre-service and post-service education, colleges focus on student training, and provide less services for enterprise employee skill improvement and continuing education, failing to practice Huang Yanpei concept of socialized school running covering life cycle education.

## **4. Overall Architecture of Innovative Industry-Education Integration Model Based on Huang Yanpei Vocational Education Thought**

### **4.1 Organizational Dimension: Constructing a Multi-Party Symbiotic Collaborative Governance System**

Breaking the limitation of traditional binary cooperation between schools and enterprises, building a five-party collaborative organizational structure of government overall planning, industry leadership, college hosting, enterprise subject, and social participation.

Local governments play the top-level overall planning function, issuing industry-education integration support policies, implementing tax reductions and financial subsidies, building official docking platforms, and formulating integration construction assessment standards; industry associations play the intermediate coordination function, investigating industrial talent demand, releasing industry technical standards, coordinating regional college specialty layout, and standardizing school-enterprise cooperation content;

vocational colleges are responsible for talent training plan formulation, basic theoretical teaching, and student daily management; cooperative enterprises are responsible for providing real production scenarios and practical projects, participating in curriculum development, teaching evaluation, and internship assessment; social organizations and vocational education societies are responsible for professional literacy education, employment guidance, and social service extension. The organization implements a governance model of joint decision-making, resource co-investment, responsibility sharing, benefit sharing, and risk prevention, solving the problems of single subject and loose rights and responsibilities.

#### **4.2 Educational Dimension: Building a Three-Stage Progressive Talent Training System Integrating Learning and Doing**

Following Huang Yanpei requirement of “integrating learning and doing, proceeding step by step”, construct a three-stage progressive education model of basic cognition stage, project incubation stage, and enterprise practice stage, running through the entire academic cycle.

The first stage is the basic cognition period. Mainly campus teaching, integrating enterprise basic cognition content. Courses are divided into three categories: public basic courses, professional basic theoretical courses, and enterprise cognition training courses. Regularly organize enterprise visits and industry expert campus lectures to establish basic post cognition, avoiding premature entry into high-intensity practical operation leading to weak theoretical foundation, achieving “understanding first, then doing”.

The second stage is the project incubation period. Implement a dual-line teaching model of “campus classroom + school-enterprise studio”, and promote “project-imported teaching”. School-enterprise dual tutors jointly decompose enterprise regular production projects into curriculum training projects, and students complete project scheme design and practical production in groups. Campus teachers are responsible for theoretical guidance, and enterprise tutors are responsible for practical operation specifications, realizing the direct application of theoretical knowledge to project practice, and implementing “synchronous hands and brain, parallel learning and doing”.

The third stage is the enterprise practice period. Students officially enter the enterprise production base, fully participate in real enterprise production, and implement the training model of “enrollment is recruitment, entering school is entering enterprise, graduation is employment”. Implement dual tutor whole-process assessment: campus teachers regularly follow up learning progress and sort out theoretical shortcomings; enterprises assess post practical operation ability and professional attitude. Assessment results are composed of theoretical scores, project achievements, and enterprise on-the-job performance, taking into account skill level and professional literacy, balancing employability of “having employment” and professional quality of “enjoying work”.

#### **4.3 Mechanism Dimension: Establishing a Long-Term Stable Operation Mechanism**

##### **4.3.1 Professional Dynamic Adjustment Mechanism**

Led by industry associations, carry out regional industrial talent demand investigation and technical development trend research every year. Schools review specialty settings annually, eliminate specialties matching declining industries, upgrade traditional specialty curriculum content, add specialties related to emerging industries, ensuring that specialty structure fits regional industrial layout; establish a quarterly curriculum content update system, enterprise front-line technical personnel participate in curriculum revision every quarter, timely integrate new processes and new technologies into teaching, solving the problem of content lag.

##### **4.3.2 Resource Co-Construction and Sharing Mechanism**

Promote two-way flow of teachers, establish a normalized system for enterprise technical personnel to teach part-time in schools and college teachers to regularly practice in enterprises, stipulating that professional teachers have no less than 2 months of on-the-job practice in enterprises every year, and enterprise technical backbones undertake no less than 16 hours of teaching tasks per semester; equipment resource sharing, school-enterprise training bases and production equipment are open to both sides, and college equipment serves enterprise small-scale research and development and employee training after school hours.

## **5. Implementation Path of Industry-Education Integration Model Based on Huang Yanpei Thought**

### **5.1 Anchoring Educational Goals, Returning to the Origin of “Having Employment and Enjoying Work”**

Correct the employment rate-oriented industry-education integration, and incorporate professional literacy into the core goal of talent cultivation; integrate Huang Yanpei thought of dedication and community into the whole process of three-stage training, and offer regular courses such as “Professional Accomplishment”; set up vocational psychological counseling and post planning guidance during enterprise internship to reduce student job burnout and short-term turnover rate; take into account employability and long-term development potential, appropriately increase innovative project training content, and improve students post transfer ability.

### **5.2 Deepening Teaching Reform, Practicing “Using Both Hands and Brain, Integrating Learning and Doing”**

Fully implement project-based and task-oriented teaching, reduce the proportion of pure theoretical indoctrination courses, and transform real enterprise tasks into teaching carriers; improve the dual tutor management system, clarify the job responsibilities, assessment standards, and salary incentives of school-enterprise tutors; build productive training bases, create training places with triple functions of teaching training, small-scale production, and technical research and development, realizing “teaching is production, training is operation”; promote the deep integration of post, course, competition and certificate [9], embed vocational skill level certificates and industry competition standards into curriculum content, realizing seamless connection between learning content and post standards.

### **5.3 Improving Coordination Mechanism, Implementing Multi-Party Linkage of Great Vocational Education Doctrine**

Strengthen the governments leading role in overall planning, lead the establishment of a normalized school-enterprise docking platform, issue clear incentive and constraint policies, and avoid arbitrary cooperation; give full play to the

bridging role of industry associations, regularly carry out industrial research, standard release, and supply-demand docking; improve meeting rules, regularly hold multi-party joint meetings, dynamically adjust talent training plans and cooperation content; build an online collaborative management platform, realizing school-enterprise information exchange, teaching process supervision, and project achievement sharing, breaking spatial and temporal communication barriers.

### **5.4 Adhering to Socialized School Running, Realizing Full-Domain Extension of Education Services**

Establish a professional dynamic iteration mechanism, optimize specialty structure and curriculum content according to industrial changes every year; expand post-service continuing education business, carry out short-term skill training for enterprise on-the-job personnel and unemployed groups, extending the vocational education service chain; undertake enterprise technical breakthroughs and small-scale research and development projects relying on the integration platform, giving play to the technical service function of vocational colleges, helping small and medium-sized enterprises transform and upgrade, realizing a virtuous cycle of education serving industry and industry feeding back education.

### **5.5 Improving Multi-Dimensional Evaluation, Ensuring Long-Term Operation of Integration Model**

Construct a four-party three-dimensional evaluation system: schools focus on evaluation of theoretical knowledge and learning habits; enterprises focus on evaluation of practical skills and professional attitude; industry associations carry out skill level evaluation against industry standards; third-party social organizations carry out tracking evaluation of employment quality and long-term career development. Evaluation results are used on the one hand to optimize talent training plans, and on the other hand as an important basis for school-enterprise cooperation evaluation and cooperation qualification continuation, forcing both schools and enterprises to continuously standardize and implement integrated education work [10].

## 6. Conclusion

Huang Yanpei vocational education thought, including the educational purpose of “having employment and enjoying work”, the teaching principle of “using both hands and brain, integrating learning and doing”, the socialized school-running policy, and the multi-party coordination concept of Great Vocational Education Doctrine, completely covers the four core levels of industry-education integration: goal, method, direction, and subject. It is an important local theoretical resource for solving the current problems of superficialization and utilitarianism in industry-education integration. Based on Huang Yanpei four ideological cores, this paper constructs an innovative industry-education integration model, and simultaneously proposes specific implementation paths from five aspects: educational positioning, teaching reform, coordination mechanism, social service, and evaluation system. This model adheres to the origin of Huang Yanpei vocational education, promotes industry-education integration from short-term project cooperation to long-term entity symbiosis, from single skill cultivation to comprehensive education combining morality and technology, and from one-way school running to multi-party collaborative socialized school running. It can effectively promote the deep integration of education chain, talent chain, industrial chain, and innovation chain, and help cultivate high-quality technical and skilled talents adapting to new quality productivity.

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