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A Study on the Three-Chain Coupling Model of Order-Based Talent Training in Private Colleges and Universities

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Abstract

The gap between production and education remains a deep structural problem that limits the improvement of applied talent training quality in private colleges and universities; after systematically reviewing studies on order-based talent training at home and abroad, this paper proposes an analysis framework based on three-chain coupling, and it explains the deeper reasons why order-based training often fails in private colleges and universities from three dimensions: curriculum chain, post chain, and evaluation chain. The study finds that the disciplinary logic of the curriculum system does not match the practical logic of post ability in a structural way. Enterprises lack internal motivation to take part mainly because property rights are not clearly defined and there is no income distribution mechanism. The disconnection in evaluation is essentially a conflict between knowledge evaluation and ability evaluation. On this basis, a theoretical model of three-chain coupling is constructed in this paper, and the working mechanism of two key interfaces, namely "post-course docking" and "evaluation feedback", is discussed. Three implementation paths are also proposed: contractual benefit sharing, dynamic updating of modular courses, and competency-based double-loop evaluation.

Keywords

Order-based training; three-chain coupling; private colleges and universities.

1. Introduction

Private colleges and universities have long faced a strange situation in training foreign language talents: the number of graduates keeps increasing, but companies still complain that they cannot find suitable people. The fact that students have difficulty finding jobs and companies have difficulty recruiting workers at the same time shows a structural mismatch between the supply side of talent training and the demand side of industry. Order-based training, which is a talent training model built on school-enterprise cooperation and market demand, has received high expectations. In 2025, the Education Department of Liaoning Province clearly suggested that colleges and enterprises should jointly build and manage industrial colleges, and order-based and customized talent training should be widely carried out; Shenyang City gives enterprises a training reward of 5000 yuan per student for order class students; Chengdu supports school-enterprise cooperation to open a number of order classes every year, with support lasting no less than 3 years in a row. These policy signals are clear and frequent.

However, the actual promotion is not satisfactory. Many order classes remain at the agreement stage, and after signing the contract, hanging the brand, and holding the class meeting, no real progress is made. Even when an order class starts to operate, some problems still exist, for example, the course content does not connect with job requirements, enterprises take part only in form, and evaluation standards differ. This kind of "ritualized cooperation" and "suspended training" shows that the difficulty of order-based training is not about concepts, but about mechanisms.

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The core question of this paper is: what kind of mechanism design is needed to make order-based training move from paper to practice? To answer this question, the paper first reviews the current research on order-based training at home and abroad and points out the theoretical gap; second, from the three dimensions of curriculum, post, and evaluation, it analyzes the practical difficulties and deep mechanisms of order-based training in private colleges and universities. On this basis, a theoretical model of three-chain coupling is built, and its internal logic and operation mechanism are explained. Finally, a workable implementation path is put forward.

2. Literature Review and Theoretical Gap

2.1. Domestic research: from concept advocacy to mechanism exploration

Research on order-based training in China has passed through two stages. The first stage, from 2004 to 2010, mainly introduced the concept and explained why it was needed. Ju Ping (2004) first brought order-based training from vocational education into undergraduate education, argued that colleges and universities should change their training model according to market demand, and listed the basic elements of order-based training. Studies at this stage made clear the core idea of order-based training: training standards are set by the market, not by the school.

The second stage, from 2010 to now, has turned to practical application and research on mechanism innovation. The cooperation between Xi'an Eurasia University and Renrenle Company started the practice of order training in undergraduate colleges. In recent years, several typical cases have appeared. Anhui Sanlian University uses the demand of economic and social development as a guide and coordinates the integration of the education chain, science and technology chain, and industrial chain. Shandong University of Foreign Studies has opened a cross-border e-commerce order class, put more than 40 real enterprise projects into the curriculum, led the establishment of a new generation information technology industry-education alliance, and built cooperation with 230 enterprises. Zhuhai Institute of Science and Technology signed a strategic agreement with Alibaba Cloud, Tencent Cloud, and Huawei Cloud to create a "school-enterprise collaboration and three-chain integration" model. The School of Foreign Languages of Chengdu University has set up a micro-specialty called "Artificial Intelligence Language Service and Translation Technology," introduced real cross-border e-commerce cases, and adjusted the knowledge map in a dynamic way.

Exploration at the regional level also deserves attention. Nanhai District uses "three-chain coordination" to rebuild the interactive logic between vocational education and industrial innovation. The deep coordination of "policy chain + ecological chain + talent chain" has produced experience that can be copied, and this experience has spread outward through the national-level city-level industry-education association.

2.2. Foreign research: institutional differences and common laws

Although the term "order-based training" is not used abroad, school-enterprise cooperation models with similar functions have existed for a long time. Cooperative Education in the United States began at the University of Cincinnati Institute of Technology[1]. The federal government has supported it through the National Education Cooperation Council by using both policy and capital, and it now covers more than 1,000 schools. An empirical study by Buller and Stull found that the economic benefits of the cooperation plan for participating enterprises can be measured: enterprises get a stable supply of talents and greatly reduce the cost of training new staff, which gives enterprises an economic reason to take part.

Germany's "dual system" is another type of system. This model is supported by national legislation. Schools and enterprises share training responsibilities: schools handle basic theory teaching, enterprises take on practical skills training, and the division of labor is clear. The dual

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system plays an important role inside the country, and it also has a strong influence on Japan's "industry-university-research cooperation," Britain's "sandwich education," Singapore's "teaching factory," and other models. Frigotto and other scholars pointed out that school-enterprise cooperative education is the form of education most closely connected with society, but its success depends on whether the system helps schools and enterprises find their own proper positions.

2.3. Research review: three theoretical gaps

Based on studies at home and abroad, three clear theoretical gaps can be found. The first gap is the bias of the research object. Most existing results focus on vocational education, while systematic research on order-based training at the undergraduate level, especially in private undergraduate colleges and universities, is still weak. Undergraduate education and vocational education differ greatly in student source, training standards, and employment direction, so research conclusions from vocational education cannot be simply copied. The second gap is the fragmentation of research perspectives. Most studies look at only one link, such as curriculum development, school-enterprise cooperation models, or evaluation systems, and they do not review the whole chain of training-docking-evaluation as a system. The failure of order-based training is usually a system problem, and improving only one part is hard to make work. The third gap is that although colleges and universities have already explored "three-chain coupling" in practice, its theoretical meaning, working mechanism, and implementation framework still lack systematic academic construction, and the theoretical basis of this concept needs to be strengthened.

3. Practical Dilemma of Order-Based Training in Private Colleges and Universities

3.1. Structural mismatch between curriculum logic and post logic

On the surface, the gap between the curriculum system and job requirements is a problem of "content lag," but in fact it is a mismatch of "organizational logic." The traditional curriculum system follows the internal logic of subject knowledge: from basic courses to professional courses, from theory to application, and from general to special. This way of organizing has the advantage of making knowledge transfer systematic and progressive, but its cost is that the curriculum structure becomes rigid and the adjustment cycle is long. For a new course, it usually takes 1 to 2 years from research, demonstration, and approval to formal opening.

Post ability develops in another way. Take cross-border e-commerce operations as an example: workers need to use foreign language communication skills, platform operation skills, data analysis ability, and customer service awareness at the same time. These abilities are not formed step by step, with foundation first and application later; instead, they are developed together while solving specific business problems. The subject-based organization breaks the complete post ability into separate courses, but after finishing each course, students find it hard to combine the comprehensive ability the post requires. This is the deeper reason why they have learned something but cannot use it.

3.2. Unclear definition of property rights and lack of enterprise incentive

Enterprises are not very willing to take part in order-based training, and this is not because they are "short-sighted"; rather, the system design fails to solve the problems of property rights and income. From an economics view, when enterprises join talent training, they are making a kind of human capital investment. But this investment faces two special difficulties. First, the ownership of human capital is uncertain: students trained with enterprise resources may choose other employers, so the investment cannot be recovered. Second, there are barriers in sending signals about training quality: enterprises find it hard to accurately identify students'

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real ability during recruitment, and the problem of adverse selection makes enterprises more likely to wait and see.

At present, most school-enterprise cooperation agreements are clearly weak in defining property rights and distributing income. The agreement content is usually limited to a functional description, such as "the school handles teaching and the enterprise provides training opportunities." There is no clear agreement on how the two parties define the property rights they invest, how training results should be shared, or how liability for breaking the contract should be borne. Under this arrangement, enterprises pay the cost but cannot be sure of the return. Their rational choice is limited participation: they may cooperate by giving a few lectures and receiving a few groups of interns, but they do not get deeply involved in the core parts of curriculum development and talent training.

3.3. Paradigm conflict between knowledge evaluation and ability evaluation

The disconnection in evaluation is, in essence, a conflict between two ways of evaluation. The evaluation led by schools focuses on knowledge: it tests students' mastery of knowledge through final exams, classroom performance, and so on. This kind of evaluation is easy to standardize, but it measures what students know, not what they can do. Enterprises care about the latter: whether students can finish tasks on their own, whether they can solve real problems, and whether they can work well with a team.

In order-based training, the conflict between these two evaluation ways becomes even larger. Enterprises want evaluation to predict job performance, but the school evaluation system cannot offer this kind of predictive ability. What is harder is that enterprise performance indicators, such as order conversion rate and customer satisfaction, do not fit logically with school evaluation indicators. The former aims at results, while the latter aims at process; the former looks at overall performance, while the latter looks at individual knowledge. This mismatch is not just a technical problem, but a problem at the paradigm level: the two ways point to different questions and follow different logic.

3.4. The systematic separation of the three chains

The three problems of curriculum lag, weak enterprise motivation, and evaluation disconnection seem independent on the surface, but their deep cause is the same: the curriculum chain, the post chain, and the evaluation chain run separately and do not form an organic whole. Curriculum development does not base itself on post ability needs, which means the curriculum chain is disconnected from the post chain; post standards do not enter curriculum design, which means the post chain is disconnected from the curriculum chain; evaluation results do not feed back into curriculum improvement, which means the evaluation chain is disconnected from the curriculum chain; and post changes do not lead to evaluation adjustments, which means the post chain is disconnected from the evaluation chain. All four groups of relations are broken, and the three chains each speak their own language.

This systematic separation creates a paradox in order-based training: school-enterprise cooperation is set up in form, but in reality the training still follows the traditional model. It is called order training in name, but in fact there is still a large distance between the students and what enterprises need.

4. Three-Chain Coupling: Theoretical Model and Mechanism of Action

4.1. Concept definition and theoretical resources

Three-chain coupling means that the curriculum chain, post chain, and evaluation chain are dynamically coordinated and organically integrated. The curriculum chain is a curriculum system that is guided by post ability needs and built on modular courses; its core feature is the

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shift from subject logic to post logic. The post chain is a competency standard system based on the industry post skill map; its core function is to turn post requirements into a reference basis for training. The evaluation chain is a diversified evaluation system based on the two subjects of school and enterprise; its core value is to feed evaluation results back into curriculum improvement[2].

The idea of coupling comes from system theory and synergy theory. A basic view in system theory is that the overall function is not equal to the sum of each part's functions, and organic connections among elements can create a system effect beyond simple addition. Synergy theory further points out that the key for a system to move from disorder to order is the formation of synergy between subsystems: information is transmitted smoothly, goals point in the same direction, and feedback is regulated in time.

4.2. Theoretical model of three-chain coupling

Using the theoretical resources above, this paper builds a theoretical model of three-chain coupling. The model starts from the idea that the success of order-based training depends on how efficiently information flows and how well feedback is adjusted among the three chains. More specifically:

Post-course docking: post ability standards are changed into curriculum goals and teaching content. The key to this change is to break down abstract job requirements into teachable ability units, and then put these units into curriculum modules.

Consistent teaching evaluation: curriculum goals are turned into evaluation standards. What to evaluate and how to evaluate depends on what ability the course tries to build. Consistent teaching evaluation is the basic guarantee that evaluation is valid.

Evaluation feedback: evaluation results serve as the basis for improving the curriculum. If students show a low compliance rate in a certain ability dimension, the related curriculum module needs to be adjusted.

Linkage of job evaluation: evaluation data reflect whether job standards are suitable. If students keep performing poorly in a certain dimension, it may be necessary to look again at whether the job requirements for that dimension are reasonable.

The information flow in four directions makes a closed loop: job requirements set training standards, curriculum implementation carries out training goals, evaluation checks training effects, and feedback improvement pushes continuous progress.

4.3. Two key interfaces

Among the four directions of information flow, post-course docking and evaluation feedback are two key interfaces, and their quality decides the overall success of the three-chain coupling.

Post-course docking involves a core question: how can job requirements be changed into course content? The basic difficulty in this change is that job requirements appear as tasks and problems, while courses are organized by knowledge and skill units. To finish this change, an intermediate link is needed: a post ability map. This map breaks job tasks into several teachable, learnable, and measurable ability units, and then puts these units back into curriculum modules. The quality of the map directly decides how accurate the change is.

Evaluation feedback involves another core question: how does evaluation data push curriculum improvement? Evaluation is not just scoring, but also diagnosis: it should answer not only how learning is going, but also where the problem is. Effective evaluation feedback needs the evaluation system to provide detailed ability diagnostic information, not just general scores. Only when evaluation can find the specific ability shortcoming can curriculum improvement have a clear direction.

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5. The Implementation Path of Three-Chain Coupling

5.1. Contractual benefit sharing: solving the problem of enterprise incentive

To solve the problem that enterprises lack enough motivation to take part, a dual-track binding mechanism is set up: a "talent co-education agreement + enterprise back-feeding fund." The talent co-education agreement is not a general cooperation memorandum, but a binding contract, and it clearly states the type and scale of resources both sides invest, the rights and obligations they enjoy, who owns intellectual property, and how income is distributed. The enterprise feedback fund requires the cooperative enterprise to put in money according to a certain proportion of the order class size, and this money is used for curriculum development, equipment renewal, and student scholarships. Setting up this fund changes the enterprise from an "outside supporter" into a "co-investor." When an enterprise puts in more resources, its willingness to cooperate becomes stronger. The core logic of this contractual arrangement is that property rights are defined and interests are tied together, so enterprises can get predictable returns from cooperation: they can first obtain qualified talents who have been customized, they can take part in defining talent standards, and their brand value can be improved.

5.2. Dynamic update of modular curriculum: solving the problem of curriculum lag

To solve the problem that curriculum updates are slow, a modular curriculum system and an enterprise case transformation mechanism are built. The basic idea of modularization is to take apart the traditional whole course into several curriculum modules that can be updated separately and combined flexibly, and each module matches a specific post ability point. When job requirements change, only the matching modules need to be updated, and there is no need to tear down the whole curriculum system; this shortens the update cycle from years to months.

The premise of modularization is to build a standardized process for transforming enterprise cases. Business cases, project documents, and job task lists from enterprises are raw materials, and they need to be processed for teaching, such as refining key problems, designing teaching links, and supporting evaluation standards, before they can enter the classroom. The key to keeping modular courses running in a sustainable way is to build a copyable transformation method and avoid the inefficient repetition of "one enterprise one case, one teacher one case."

5.3. Competency-based double-loop evaluation: solving the problem of evaluation disconnection

To solve the problem that evaluation does not connect with post ability, a 4:3:3 school-enterprise evaluation weight model is built: enterprise assessment takes up 40%, classroom performance takes up 30%, and final exams take up 30%. In this evaluation system, enterprises have the highest weight. The purpose is to use the shift of evaluation rights to force curriculum content and teaching methods to move closer to job requirements[3]. Enterprise assessment includes the quality of project completion, teamwork performance, professional quality, and other dimensions, and these are scored by both enterprise tutors and school teachers.

The meaning of "double loop" is this: evaluation still has the checking function, which judges whether students meet post ability standards (the outer loop), and it also has a diagnostic function, which finds weak parts in course teaching and feeds back improvement (the inner loop). The outer loop answers "unqualified," and the inner loop answers "how to improve." When the two are combined, evaluation is not just the end point, but also the starting point.

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6. Conclusion

Order-based training is not a new idea, but there are not many cases in which it has truly worked in foreign language disciplines at private colleges. The reason is not that the idea is not advanced enough, but that the mechanism does not match. This paper's core judgment is that the failure of order-based training is systematic: the three chains of curriculum, post, and evaluation run separately and do not connect with one another, so the integration of production and education remains at the level of point-like cooperation. The essence of three-chain coupling is to string these three links into a closed loop, letting demand information flow into the training process and letting evaluation data push teaching improvement.

Of course, as a mechanism design, the effectiveness of three-chain coupling still needs to be tested in practice. Future research can go deeper in two directions: first, action research can be carried out in specific colleges and universities to test how workable the model is and what actual effects it has; second, the differentiated application of three-chain coupling under different professional and industrial backgrounds can be examined. In any case, the shift from "school-defined training standards" to "market-defined training standards" is a clear direction, and three-chain coupling is only one possible path to reach that goal.

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