

# *Open Training Center and Implementation of School-Enterprise Cooperation Projects in Stages*

—A Case Study of E-commerce Major in Higher Vocational Colleges

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**Abstract**—School-enterprise cooperation is a major feature for national higher vocational education. This work focused on the main problems existing in the current school-enterprise cooperation of higher vocational colleges, and proposed to actively open the training center and implement the school-enterprise cooperation in stages based on the characteristics of e-commerce major. This project will build an e-commerce open training center of "school-enterprise cooperation, openness for mutual benefit and integrated teaching and research", so as to achieve the quartet benefit of "schools, enterprises, teachers and students" and achieve the long-term cooperation between higher vocational colleges and enterprises.

**Keywords**—E-commerce; Open training center; School-enterprise cooperation; Quartet benefit

## I. INTRODUCTION

"Vocational education refers to an educational activity carried out to enable educated persons to acquire certain vocational skills or professional knowledge and form a good professional ethic to meet the needs of a certain social productive labor [1]." According to the characteristics of vocational education, many vocational colleges have adopted the teaching method of school-enterprise cooperation.

Throughout the school-enterprise cooperation in developed countries, there are roughly two types: one is the school-enterprise cooperation model based on enterprises, such as the "dual system" in Germany; the other is the school-enterprise cooperation model based on schools, such as the "teaching factory" in Singapore. The mode of school-enterprise cooperation in domestic vocational education basically belongs to the school-based "school-enterprise cooperation" model, such as "order training", "vocational education group", "2+1 mode" and so on. The school-enterprise cooperation mode of higher vocational colleges mainly includes "work-study alternation mode", "order cooperation mode", "teaching apprentice mode", "post-practice mode", "industry, teaching and research cooperation mode", "co-construction of practice base mode" and so on.

## II. RESEARCH ON THE CURRENT SITUATION OF SCHOOL-ENTERPRISE COOPERATION IN E-COMMERCE MAJOR OF HIGHER VOCATIONAL COLLEGES

At present, the school-enterprise cooperation model is basically school-oriented. Schools are always in active position, and school-enterprise cooperation is in shallow cooperation. One reason is that the school-enterprise cooperation is a kind of interest-driven cooperation for enterprises, while the maximization of profits they pursue is affected by short-term interests, so they are not positive in participating in the talent training in school-enterprise cooperation. The other reason is that the school's own advantages are not enough, for example, the level of research, the dual type teachers (not in conformity with reputation), training conditions, students' quality (talents irreplaceable) are not attractive to enterprises. The utilization rate of the training center is not high, and the lack of openness is also one of the reasons.

The study of students is the accumulation and gradual progress of many courses, and it is necessary to persevere. At the same time, the improvement of students' professional skills also requires a gradual process, which requires a large amount of spare time. It needs to continue to consolidate, improve and learn deeply during a longer period of time.

For the e-commerce major in higher vocational colleges, enterprises mainly offer relevant products and information, and college offer venues. Under the environment of open training centers, students conduct e-commerce network marketing under the leadership of teachers and develop entrepreneurial incubation projects [2].

## III. CONSTRUCTION MODE OF SCHOOL-ENTERPRISE COOPERATION IN E-COMMERCE MAJOR OF HIGHER VOCATIONAL COLLEGES

The main ways of school-enterprise cooperation mode: (1) School-enterprise cooperation mode for the joint construction of training centers; (2) Combination mode of research projects, semester projects and competitions. The curriculum implementation plan of the school-enterprise cooperation mode in stages, as shown in TABLE I.

TABLE I. CURRICULUM IMPLEMENTATION PLAN

First-year (open training center)		Second-year (open training center)		Third-year (off-campus training base)		
Public foundation course		Professional course		Company culture		
Professional course		Development class				
Knowledge and quality development course				Professional quality training		
Humanities quality extracurricular activities						
Innovative design, skill competition				Vocational skill training		
Semester project A		Semester project B		Comprehensive training		
						Graduation Comprehensive practice

Based on the concept of advanced vocational training, the school-enterprise cooperation project will be implemented in stages according to the progress of the students' learning in campus. Students can conduct school-enterprise cooperation projects in open training centers through semester projects and entrepreneurial e-commerce comprehensive training.

The semester project draws on experience of Singapore's teaching factory and plays an important role in the curriculum implementation program. Not only can it combine the professional knowledge and professional skills of each semester, but also integrate into the practice of real projects. The semester project involves 30 hours and 2 lessons per week, which will be completed through teachers' guidance and students' participation.

The entrepreneurial e-commerce comprehensive training arrangement is carried out in the weeks before the student's post training. It will run through the professional knowledge learned in the first and second academic years. The entrepreneurial project is based on previous school-enterprise cooperation projects.

The school-enterprise cooperation mode for the joint construction of training centers is market and social demand-oriented, making full use of the resources and environmental advantages of the school, the training center and the enterprise. This mode organically combines students' classroom learning, skill training, term projects and actual work, and cultivates development-oriented, compound and innovative high-level technical skilled talents required by service industry transformation and upgrading.

**IV. OPENING TRAINING CENTERS AND CARRYING OUT SCHOOL-ENTERPRISE COOPERATION PROJECTS IN STAGES**

*A. The first stage: students open their own real online stores, get familiar with the operation process of the real e-commerce platform and cultivate good operational ideas.*

Students will take part in the professional course before the second semester. In the second half of the semester, schools will set up the course Term Project A. Based on the school-enterprise cooperation project; enterprises will support students to open a personal online store by providing products. The course will be held in the form of competition.

In professional classroom teaching, students will learn the basics and common knowledge. Skills learning and training are carried out through the simulation environment in class, through which students can master the basic skills and knowledge of e-commerce, get familiar with the operation process of online store, and lay a solid foundation for the operation of real e-commerce environment.

"What's learned from books is superficial after all. It's crucial to have it personally tested somehow". Students must be exposed to real e-commerce operations and promotion processes. In the course of Semester Project A, each student opens an online store independently. Compared with various e-commerce platforms, C stores in Taobao have lower thresholds of opening less risk. Students only need to pay a small amount of money to sell the products provided by enterprises. In response to the existing Taobao rules, the new store will have a three-month support period. As long as students do a good job in the decoration of the store, the basic setting of the store, the introduction of new goods, and some basic sales, then there are usually some orders. In the whole process of network marketing, if students can do a good job in the store's customer service, then the sales of store products will gradually increase. When there is an order, students will organize goods according to the order and collect goods for delivery.

In the entire online store operation process, students do not bear the risk of goods pressure and indemnity. Due to the support of Taobao advertisement, students do not need too much promotion costs since it is a new store, so that students can practice marketing at low cost. Schools will open the training center and arrange professional teachers to take shifts to guide students to solve various problems in the operation process.

Students in turn carry out practical operation of Taobao from the aspects of online store construction, online and offline integrated marketing promotion, and practical operation of e-commerce. When students solve the problems encountered in the online sales process through their own efforts and when they get the first order, they cannot hide their joy, and there are even some students laughing and saying, "Teacher, it's no problem to make a pocket money." It is difficult to obtain in the course of practical training [3]. When the Semester Project A course is over, teachers will use the funds provided by the enterprise to reward the students who have sold a certain amount of goods. Thus, healthy competition atmosphere is generated among students, and the learning enthusiasm is constantly on the rise. Therefore, it can achieve the goal of "competition promotes learning, education and construction".

Through this stage of study, students can fully exercise their abilities of logical thinking, business marketing, communicating, decision-making and executing, improve their e-commerce operation knowledge and practical skills, and increase their enthusiasm for innovation and entrepreneurship, which will lay a solid foundation for entering the workplace and society in the future.

**B. The second stage: enterprise online stores establish trusteeship and build TP service platforms of e-commerce.**

Through the first stage, students are already familiar with the online store operation platform, and at the same time have a certain understanding of products. However, after three months, Taobao no longer supports the new stores, and stores require a certain fee to get promotion. At the same time, rules of the online store operation platform often change, and the so-called "real stuff" is only available to those who have long been engaged in online store operations. For the above reasons, it is better to sign a technical service agreement with enterprises through teachers, so as to establish trusteeship of the enterprise's stores, such as JD.COM, Tmall, enterprise stores, Ali and so on. Enterprises provide store operation and promotion expenses, and schools employ high-level e-commerce personnel who have the rich practical experience and are familiarity with network entrepreneurship operations as part-time teachers. The part-time teachers of the enterprise use the Semester Project B" course to train students, and students use their spare time in the open training center to act as operation personnel in the form of a team and operate online stores for third-party enterprises.

Students conduct daily operation, management, marketing, customer service and promotion in the form of a team. Rationally dividing the work can cultivate students' spirit of

perseverance and hard-working, rigorous and realistic work attitude and teamwork ability to solve the actual operation of the online store.

The TP service platform of e-commerce can help enterprises save money and a lot of time, so as to effectively improve the sales volume of online stores and enhance the core competitive advantage of stores.

**C. The third stage: students should be arranged to participate in entrepreneurial e-commerce comprehensive training [4], so as to train their comprehensive skills.**

Through previous cooperation, students' proficiency in enterprise products and online shop operation skills have been greatly improved. In order to strengthen students' job skills, schools should arrange an entrepreneurial e-commerce comprehensive training for students after they finish all the core courses. The entrepreneurial project relies on the school-enterprise cooperation project of the first and second stage.

Based on the needs of enterprises for e-commerce jobs, schools should provide entrepreneurial e-commerce comprehensive training, set up training positions, and run through core courses of the major in practice. The training positions, post tasks and corresponding courses in the e-commerce comprehensive training are shown in TABLE II.

TABLE II. TRAINING POSITIONS, JOB TASKS AND CORRESPONDING COURSES

Training positions	Job tasks	Corresponding courses
Store operation	<ol style="list-style-type: none"> <li>1. Market analysis, product selection, online store positioning;</li> <li>2. Product title optimization, description editing, product shelves, etc.;</li> <li>3. Regularly follow up and evaluate the promotion effect, submit statistical analysis report of the promotion effect, put forward marketing improvement measures and propose feasible improvement plan in time;</li> <li>4. Data analysis and monitoring;</li> <li>5. Daily management and team management of the online store.</li> </ol>	<ol style="list-style-type: none"> <li>1. E-commerce operation</li> <li>2. Introduction to e-commerce</li> <li>3. Data analysis</li> </ol>
Graphic design	<ol style="list-style-type: none"> <li>1. Responsible for Taobao stores' home page decoration, style design and production;</li> <li>2. Timely update the overall image design of Taobao storefront, beautify the product description, and process the image of the store product;</li> <li>3. Responsible for the graphic support of marketing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Online graphic design</li> <li>2. Online store operation</li> </ol>
Activity planning	<ol style="list-style-type: none"> <li>1. Responsible for the company's activity planning, develop detailed marketing plan and online store activity plan based on the company's sales status and execute it;</li> <li>2. Keep abreast of industry information and formulate corresponding business and promotion plans;</li> <li>3. Responsible for the registration of Taobao internal activities: such as daily specials, gold coins, etc.;</li> <li>4. Responsible for the registration of Taobao guiding page and the promotion of sales promotion.</li> </ol>	<ol style="list-style-type: none"> <li>1. E-commerce project planning and design</li> <li>2. Network marketing</li> <li>3. Online store operation</li> </ol>
Promotion Online store promotion: In-site free promotion In-site paid promotion Independent access of Taobao Out-site promotion of Taobao Other promotion: Building enterprise website promotion Building micro-store, HiShop, etc.	<ol style="list-style-type: none"> <li>1. Select keywords, SEO, use of business staff;</li> <li>2. Use the station through train, drill exhibition, Taobao, gang promotion;</li> <li>3. Use network soft marketing and advertising to promote Taobao micro-Amoy;</li> <li>4. Promote through new media marketing methods such as public number, Weibo, WeChat, and email;</li> <li>5. Construction and promotion of corporate websites.</li> </ol>	<ol style="list-style-type: none"> <li>1. Online store operations</li> <li>2. Search engine optimization</li> <li>3. Social marketing</li> <li>4. Web design basis,</li> <li>5. Dynamic website construction</li> <li>6. Website operation and promotion</li> </ol>
Customer service supervisor, customer service	<ol style="list-style-type: none"> <li>1. Responsible for receiving after-sales customers, handling disputes, returning goods, evaluation processing, customer Q&amp;A, etc.;</li> <li>2. Responsible for copywriting creativity and writing, support marketing work with soft advertisement;</li> <li>3. Responsible for the maintenance and secondary development of old customer relationships;</li> <li>4. Customer database establishment, data analysis, decision support, etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Customer relationship management</li> <li>2. Database technology SQL</li> <li>3. Business negotiation and sales skills</li> </ol>

As a practical training program within the teaching plan, the costs involved in the comprehensive training of entrepreneurial e-commerce, such as promotion costs, art costs and purchase of third-party software fees are afforded by the school teaching expenses. Through entrepreneurial e-commerce comprehensive training, students can not only integrate the professional knowledge they have learned at school into practical work, but also further expand the school-enterprise cooperation project and stabilize the school-enterprise cooperation project for a long time.

#### V. OPENING TRAINING CENTERS AND CARRYING OUT SCHOOL-ENTERPRISE COOPERATION PROJECTS IN STAGES TO ACHIEVE QUARTET BENEFIT

##### A. *Providing students with a real working environment*

In the open e-commerce training center, students can experience corporate culture, practice in various positions, and strengthen their practical skills and innovative ability. After school, students establish a Taobao entrepreneurship exchanging group to discuss and communicate, and they also set up an e-commerce association offline. The school will regularly invite actual combat lecturers of enterprises to hold various training and lectures to form a good atmosphere for starting up a business on campus. Enterprises take part of the profits to reward students in the form of competition, and students can get a certain economic benefit.

##### B. *Improving teachers' ability to develop scientific research projects and providing real teaching project cases for teachers' teaching.*

E-commerce is developing rapidly and changing rapidly. The open e-commerce training center provides teachers with real teaching, training programs and research projects. By signing a technical service contract with the enterprise, teachers are exposed from the small environment that was originally confined to the school to the real environment of the enterprise [5]. They not only improve their professional ability and the level of scientific research, but also provide service functions for the society. The content of the training program jointly developed by enterprises and school teachers can not only deepen students' understanding of e-commerce, but also deepen their understanding of the enterprise, thus realizing the maximum benefit of the integration of "teaching, learning and research"

##### C. *Schools build an e-commerce open training center of "school-enterprise cooperation, openness for mutual benefit and integrated teaching and research" to make the "integration of teaching, learning and research" sustainable.*

The teaching mode of school-enterprise cooperation of e-commerce in the open training center solves the problems of insufficient hardware and software resources and relatively single teaching methods in e-commerce training teaching, so that students can experience and operate the whole process of e-commerce activities in person, thus enhancing their interest in learning.

Through the open e-commerce training center, school resources can be integrated, and students and teaching resources can be used to establish the e-commerce business service training base. Social service capabilities and the school's reputation can be improved through the open e-commerce training center. Through the open e-commerce training center and "full openness, service locality, resource sharing and sustainable development", the training mode of skill-based talents in school-enterprise cooperation can establish long-term cooperation with industry and other social parties. This mechanism can draw on the continued support and participation of all parties in terms of capital, equipment, educational resources, and human resources, so as to continuously develop new training programs, form a sustainable development mechanism, and establish a benign operational mechanism for the training center [6].

##### D. *Serving the local economy*

On the enterprise side, their products are placed in the venue provided by the school at a low price to facilitate students to understand the products and deliver the goods. Enterprises produce some display cabinets for some products on campus, and inform students about the products and information by holding lectures. Through the first stage of each student opening an online store, enterprises achieve the effect of the brand promotion; through the second stage, with the guidance of the part-time teachers of the enterprise, students establish trusteeship of enterprise online stores to effectively improve the transaction volume of the online stores, and enterprises have profit, which is the ultimate goal of enterprises to carry out school-enterprise cooperation; through the third stage of taking school-enterprise cooperation project as the carrier, students' enthusiasm can be fully mobilized, which can further deepen the school-enterprise cooperation projects for a long-term cooperation mechanism [7].

Through the school-enterprise cooperation project, an e-commerce base that radiates schools and surrounding areas to give support for the social service can be created. For example, Tianjian Square, which is adjacent to our school, is mainly engaged in hardware. It is in its infancy, but it has great potential since it cooperates with excellent e-commerce enterprises. The north campus is located in ZhongLuoTan town, BaiYun district, Guangzhou city, and its economy has always been based on agriculture, which is an important agricultural production base in Guangzhou. China strongly supports agricultural e-commerce. Therefore, the demand for e-commerce technology service is relatively large, and the open e-commerce training center has extensive cooperation space.

#### VI. SUMMARY

In view of the main problems existing in the current school-enterprise cooperation of higher vocational colleges, it is necessary to open the training center and implement the school-enterprise cooperation project in stages. Students can conduct school-enterprise cooperation projects in open training centers through semester projects and entrepreneurial e-commerce comprehensive training. Through the open training center and the school-enterprise cooperation project in stages, the e-commerce open training center of "school-enterprise

cooperation, openness for mutual benefit and integrated teaching and research" can be established to achieve quartet benefit for "schools, enterprises, teachers and students", thus achieving the long-term cooperation between higher vocational colleges and enterprises.

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