

## Research on the Training Mode of Comprehensive Competitiveness of Pre-employment in Higher Vocational Colleges Based on the Integration of Industry and Education

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### Abstract

With the development of market economy and the country's demand for high-skilled and innovative talents, higher vocational colleges need to explore an effective talent training mode to train a group of high-skilled talents suitable for social development and meeting the needs of enterprises for the country and society. "Pre-employment Practice" is a kind of practice mode reconstructed for the enterprise practice of engineering college students in colleges and universities. It takes "integration of production and teaching" as the concept, builds a practice platform, and trains the working ability and social adaptability of college students. Employment of higher vocational students is related to their own development and the vital interests of millions of families, and affects the sustainable and healthy development of Higher Vocational education. Studying the employment competitiveness of higher vocational students will help them to successfully devote themselves to suitable occupational positions, maintain and improve the employment rate, and achieve higher quality employment. This paper probes into the problems and ways of reforming and implementing the training mode of comprehensive competitiveness of pre-employment in Higher Vocational Colleges under the background of integration of industry and education.

### Keywords

Market economy; Pre-employment; Integration of industry and education; Competitiveness.

### 1. Introduction

Under the background of mass innovation and entrepreneurship, from the perspective of education, higher vocational colleges undertake the important task of cultivating innovative and entrepreneurial talents serving economic development [1]. In the job market, the employment situation of fresh graduates is very grim, not only because there are too many monks and too few porridge, but also because of the lack of comprehensive competitiveness of college students. Under the promotion of the national strategic level, higher vocational colleges actively explore ways to cultivate innovative talents, which is a positive measure to promote innovation and entrepreneurship education [2]. The employment problem of college students is an inseparable part of the employment system of the whole society. It is an important livelihood issue that affects the career prospects of the majority of graduates and the vital interests of thousands of households [3]. The employment problem of higher vocational students is not only related to the development of higher vocational students, but also to the survival and development of higher vocational colleges, and to the reform of higher education and the stability and prosperity of society. "Pre-employment practice" is an internship model reconstructed for college students in engineering colleges. It uses the concept of "integration of production and education" to build a practical platform to cultivate college students' work ability and social adaptability [4].

Higher vocational colleges should aim at cultivating high-level technical application-oriented talents at the grassroots level, oriented to production, service-oriented and management. From the needs of professional core skills, choose the most basic and necessary content to cultivate students' careers. Core skills [5]. Therefore, the concept of further change, in order to improve the employability of

students, fundamentally promote the development of the cultivation model of higher vocational talents in China, and improve the level of running schools and the quality of running schools [6]. It is necessary to take employment as the guide and deepen the reform of higher vocational education. Higher vocational colleges should be based on higher vocational education, and win the recognition and respect of the society with distinctive characteristics of running a school, excellent quality of personnel training and high employment rate of graduates. [7]. Employment of higher vocational students is related to their own development and the vital interests of millions of households, and affects the sustainable and healthy development of Higher Vocational education, as well as the construction process of human resources power and socialist modernization power. The integration of industry and education is an important guiding ideology for the development of modern vocational education. This paper explores the problems and ways of reforming and implementing the training mode of comprehensive competitiveness of pre-employment in Higher Vocational Colleges under the background of integration of industry and education.

## **2. Analysis on the Current Situation of Comprehensive Competitiveness of Higher Vocational College Students**

The employment competitiveness of higher vocational students means that higher vocational students can overcome their competitors in the employment market by virtue of their own advantages to obtain suitable professional positions and can well meet the job demand. The employability of college students should mainly include four aspects: psychological self-esteem and achievement motivation, mastery of knowledge and basic skills, ability to think and learn, and interpersonal skills. Some higher vocational colleges blindly pursue so-called hot majors, do not look at their own resources and conditions, and do not make market demand forecasts, thus inevitably causing homogeneous competition among higher vocational colleges. Systematic planning and coordinated promotion deepen the innovation and entrepreneurship education reform in colleges and universities, guide college students to deeply participate in innovation and entrepreneurship, improve their comprehensive quality and employability, and improve the quality of employment [8]. In the job market, the employment situation of fresh graduates is very grim, not only because there are too many monks and too few porridge, but also because of the lack of competitiveness of college students in the job market. The job hunting process itself is also a process of effective communication and communication between job seekers and recruiters. Higher vocational students with good communication and expression skills can not only listen carefully and accurately understand the information that recruiters want to know, but also can properly and orderly express the corresponding information.

Under the situation of more intense competition for talents, it is necessary for higher vocational students to master systematic scientific and cultural knowledge, professional theoretical knowledge and necessary social knowledge through reform. On the basis of referring to the relevant research results of the composition of College Students' employment competitiveness, combining with the information obtained from interviews and surveys with employers, and considering the influence of various factors on the employment of Vocational students, the composition of vocational students' employment competitiveness can be summed up as the basic competitiveness, core competitiveness and environmental competitiveness. The specific build model is shown in Figure 1.

It is of great significance to construct the mode of cooperation between higher vocational colleges and enterprises for the improvement of higher vocational students' innovation ability and the cultivation of practical quality. Team cooperation ability is a kind of ability to voluntarily cooperate with others and make concerted efforts according to the needs of work activities in order to achieve the established goals. Most students are arranged to practice in enterprises through schools, while a small number of students find their own internship units and positions. However, many students lack understanding of the role and purpose of the internship, unwilling or reluctant to participate in the internship, or pay too much attention. The structural contradiction between supply and demand has brought challenges to the current development model of colleges and universities. It also reflects the

lack of employment competitiveness of a large proportion of college students, especially higher vocational students, and the inability to meet the conditions in the face of the talent needs of competitors and enterprises. Enterprises require employees to be able to work with one heart and one mind, cooperate and help each other, so as to complete the tasks and objectives of the organization with high efficiency and quality.

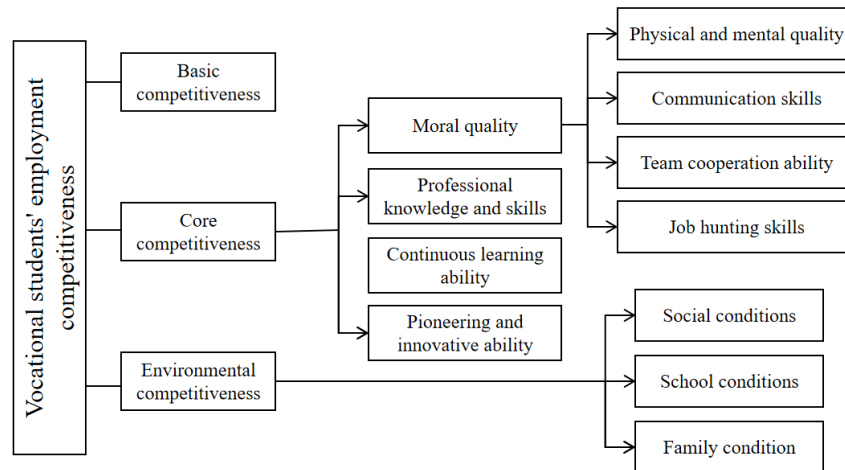


Figure 1 Figure1 Composition of the employment competitiveness of students from higher vocational colleges

### 3. Implementation Approaches of Classified Training of Higher Vocational Talents Based on Integration of Industry and Education

#### 3.1 Cultivate a Correct Concept of Employment

With the continuous improvement of social and economic level, people's requirements for occupation are not limited to obtaining reasonable remuneration, but also to be able to meet spiritual needs, give full play to their talents and realize their own value in life. In the actual teaching, the courses in engineering colleges and universities still follow the teaching mode of emphasizing theory over practice, and many colleges and universities consciously raise the proportion of practical teaching hours when making teaching plans. School-enterprise cooperation promotes the interaction between college students and the social environment through various practical carriers. In the process of interaction, students are trained to have comprehensive professional-related qualities, so that students can better combine theory with practice [9]. In-depth cooperation between schools and enterprises will change the traditional relatively rigid teaching mode, bring real projects into teaching, and students will participate in all aspects of project design and operation. The core competitiveness is directly related to the employment level and future career development of higher vocational students and is the decisive factor affecting the quality of employment. Relying on the integration of industry and education, higher vocational colleges can start with mechanism, carrier and method to provide Incubation Platform for the cultivation of innovative entrepreneurs in Higher Vocational colleges.

Employment competitiveness is an individual's ability to obtain and maintain work, make progress in work and cope with changes in work and life. Employment concept is not unchanged, but constantly developing. With the change of environment, economic status and outlook on life and private world outlook, this concept will change accordingly. There are many factors that make it difficult for college students to find jobs. Because each person's education level, hobbies, personality characteristics, life background are different. Therefore, their views on employment are different. To meet the specific implementation needs of multi-discipline data collection, processing and integration, as well as the application of multi-discipline entrepreneurship awareness visualization system. For example, Table 1 is a survey and statistics of the degree of teaching to achieve the goal of entrepreneurship awareness management education.

Table 1 Survey on the goal of teaching and achieving entrepreneurial awareness management education

Degree of realization	Complete realization	Partial realization	Not realization
Number of people selected	26	58	52
Percentage (%)	19.1	42.6	38.2

The study is based on the relationship between multi-regulation data of various departments and the existing information resources of college students' employment, and establishes a multi-integration data directory system to calculate the output of each unit in the hidden layer:

$$AE_i = ES_i / S_i = \sum_j (1 - \sum_q P_{iq} m_{jq}) / \sum_j \tag{1}$$

According to the mathematical idea, the relevant data is obtained to describe in detail how the information gain is obtained:

$$o_j(t) = f \left( \left[ \sum_{i=1}^n w_{ij} x_i (t - \tau_{ij}) \right] - T_{ij} \right) \tag{2}$$

Calculate the geometric mean of all elements in each row in the decision tree:

$$K_{s,d} = \frac{1}{MN} \sum_{m=1}^M \sum_{n=1}^N \frac{|W_{s,d}(m,n) - \mu_{s,d}|^4}{\sigma_{s,d}^4} \tag{3}$$

Get:

$$D(V_i, V_i') = \sqrt{\sum_{i=1}^c \left( \frac{V_i - V_i'}{|V_i| + |V_i'|} \right)^2} \tag{4}$$

With the continuous improvement of the modern enterprise system, enterprises need more employees to have the ability of team cooperation, to be able to coordinate and cooperate with other members in different positions of work, to promote each other, to develop together, and to complete the tasks and objectives of the organization with high efficiency and high quality. Nowadays, when many mature enterprises recruit fresh graduates, they often think more about the moral qualities of job seekers, especially the integrity consciousness, sense of responsibility, endurance spirit, etc. Different regions have different resource endowment advantages, and their different economic development models have different requirements on the quality of talents. Most higher vocational colleges are relatively scattered in specialty setting, and have not formed the scale of running a school or characteristic specialty. Moreover, most specialties are not suitable for the development of regional economy and industry. The employment competitiveness of higher vocational students is the ability of higher vocational students, as the main body of competition, to find suitable jobs to play and realize their own values through the organic coordination and integration of knowledge, skills and abilities, and to defeat rivals in the employment market.

### 3.2 Cultivating Students' Core Professional Ability

The process of job hunting is essentially a process of communication between job seekers and recruiters. Whether the two sides can communicate effectively determines the success or failure of job hunting. Good language expression ability can not only make graduates express themselves well in the job market, leave a good first impression on employers, but also make them happily interact with people in their future work and life. Among the different types of universities, the employing units obviously tend to the students of key universities. Many employers have certain requirements for the major, educational level and source of students they graduate from when recruiting. In the context of the sharp increase in the number of college graduates and the limited increase in the effective demand of society, some regions and industries have formulated restrictive policies on the level of academic qualifications and the source of students, which, to a certain extent, weaken the employment competitiveness of Higher Vocational students. Professional skills are an important guarantee to transform knowledge into material, and are necessary practical skills for higher vocational students. Professional knowledge and skills are the most critical components of vocational

college students' employment competitiveness and the basic guarantee for their survival and development in the job market.

Whether students can properly evaluate themselves will directly affect college life, career orientation and individual career development. The concept of choosing a job changes and develops with the change of the environment of choosing a job. Only by knowing exactly the employment outlook of college students can the education and teaching management, ideological and political education and employment guidance in colleges and universities be more targeted. So as to better carry out employment concept education. Figure 2 shows the dynamic evolution of college students' employment awareness evaluation system.

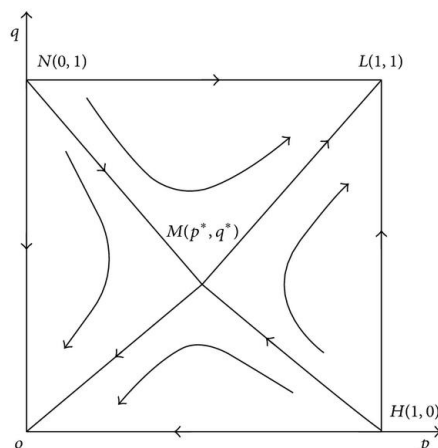


Figure 2 Dynamic evolution of employment awareness assessment system

From the perspective of national policy, the government should play a macro-control function and vigorously support the reform of higher vocational colleges. Most of the higher vocational colleges offer educational courses such as career planning for college students. The content of the course only covers policy interpretation, information release, and workplace application skills. The status of the components of employment competitiveness can not only determine the outcome of competition, but also determine the actual performance of employment competitiveness of higher vocational students and their potential for employment competition [10]. From the perspective of talent training mode, it is necessary to change the talent training mode of higher vocational colleges and strengthen career planning and employment guidance education. Higher vocational education must be adapted to regional economic development and industrial restructuring to truly reflect its characteristics and values. Continuous pre-employment practice, students' professional theoretical knowledge and practical ability can be continuously and repeatedly practiced and improved, innovative entrepreneurship awareness, engineering practice awareness and ability have been significantly enhanced, and social adaptability has been greatly improved. It is necessary to cultivate students' good habits in the way of goal management and help them establish correct employment outlook and improve their employment competitiveness by defining their goals and direction of endeavor through career planning.

#### 4. Conclusion

Under the background of the increasing number of college graduates and the limited increase in the effective demand of the society, it is the key for higher vocational students to achieve higher quality employment while maintaining high employment rate and improving employment competitiveness. From the employment situation in recent years, it is not difficult to find that in the employment market, the talent selection mechanism is usually interfered by local household registration or network factors, and the advantages of higher vocational college students in the employment force are not obvious. In order to change the current situation of enterprise practice for college students, the concept of "integration of production and education" must be integrated into it. Some students will also have uncontrollable external factors due to family background or student origin, which will affect the



further development of school-enterprise cooperation, and it is difficult to really play a beneficial role in the impact of school-enterprise cooperation on employment competitiveness. The talents trained by innovative entrepreneurship education mode have multiple knowledge structures, abilities and qualities, can adapt to the society quickly, and have strong employment competitiveness. Employment competitiveness of higher vocational students not only includes many qualities and abilities of Higher Vocational students, but also is affected by relevant external conditions. Only by concerted efforts of all parties can we solve the employment problem of higher vocational students in a real sense, alleviate all kinds of contradictions in employment, and promote the stable development of the country and society.

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