

# ***Research on the Tripartite Linkage Mechanism of Enrollment, Training and Employment in Colleges and Universities under the Background of Industrial Transformation—Taking Hezhou University as an Example***

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**Abstract:** Enrollment, training and employment are three important links in the process of personnel training in colleges and universities. For a long time, because the three belonged to different functional departments, they failed to form a long-term effective linkage mechanism, resulting in the quality of personnel training unable to meet the needs of economic and social development, and problems such as difficulty in employment of college graduates and difficulty in enterprise recruitment have emerged. At present, my country's economy has shifted from a stage of high-speed growth to a stage of high-quality development, deepening supply-side structural reforms, promoting colleges and universities to form a linkage mechanism for employment, enrollment, and training, and promoting multi-channel employment and entrepreneurship for college graduates to achieve high-quality and full employment, which is an important task for higher education to actively adapt to the needs of national economic and social development and improve the quality of personnel training in colleges and universities. This paper firstly introduces the current situation of colleges and universities in the construction of the tripartite linkage mechanism of enrollment, training and employment. Then it analyzes the problems existing in the current tripartite linkage mechanism. Finally, relying on the school-enterprise cooperation, the upgraded intelligent learning factory of industry and ZTE ICT industry and education integration innovation and entrepreneurship Base, the construction method of the tripartite linkage mechanism of college enrollment, training and employment is put forward.

## 1. Introduction

At present, the employment problem of college students is mainly reflected in the contradiction between the effective demand of the society and the ineffective supply of talents in colleges and universities, and the contradiction between the limited demand of the society and the excessive supply of colleges and universities. How to effectively build the connection between higher education and social needs. The point becomes the key to solving the problem. Taking the employment of college students as the foothold, actively exploring the internal relationship between enrollment, training, and employment, and promoting the research on the linkage mechanism between the three have become current research hot spots. At present, my country's economy has shifted from a stage of high-speed growth to a stage of high-quality development. Deepening supply-side structural reforms and improving total factor productivity cannot do without the support of talents. It is an important task for higher education to actively adapt to the needs of national economic and social development and improve the quality of talent training in colleges and universities to promote the formation of employment and enrollment plans and talent training linkage mechanisms in colleges and universities, promote multi-channel employment and entrepreneurship of college graduates, and achieve higher quality and fuller employment.

Aiming at the problems existing in college enrollment, personnel training and employment, in 2019, Zhang Yunxia et al. [1] pointed out that colleges and universities are currently in a relatively passive situation. The main reason is that colleges and universities have not formed a benign linkage between enrollment, training and employment. mechanism. In 2020, Wang Xinxin et al [2] pointed out that most colleges and universities currently have problems such as imperfect professional structure, unreasonable personnel training, and disconnection between enrollment and employment. In 2021, Cheng Haiyu et al. [3] pointed out that although various colleges and universities are actively exploring and building an integrated linkage mechanism for enrollment, training, and employment, and have achieved a series of research results, the construction of the integrated linkage mechanism of most universities still does not conform to social standards. The demand for personnel training in colleges and universities, and its operation effect is not satisfactory.

As for the construction measures of the tripartite linkage mechanism of college enrollment, training, and employment, in 2017, Liu Zhongxin et al. [4] proposed to strengthen employment monitoring, flexibly manage professional settings, and carry out individualized development based on students' personal wishes, and implement comprehensively and from multiple angles Talent training program. In 2018, Lu Guixin et al. [5] proposed to solve the existing problems from two aspects. One is to deepen the reform of the college admissions system, and the other is to actively promote the reform of the talent training model. In 2020, Fu Lijuan et al. [6] considered the development of information technology and proposed to give full play to the role of information technology in the management of college enrollment and employment. In 2021, Li Ruiyun [7] and others proposed that in the process of building the tripartite linkage mechanism, it is necessary to strengthen inter-school and school-enterprise cooperation, pay attention to the cultivation of teachers' "professional" ability, and at the same time focus on improving the cultivation of students' innovative and entrepreneurial ability.

To sum up, for the research on the linkage mechanism of college enrollment, training, and employment, various scholars have put forward different views and plans from different angles, laying a rich theoretical foundation for subsequent research. However, under the influence of factors such as national industrial transformation, domestic economic and industrial restructuring, and weak global economic recovery, the current employment situation is still not optimistic. It is a long-term, arduous and complex important topic to continuously promote the research and practice

of the three-in-one linkage mechanism of enrollment, training and employment in colleges and universities.

In recent years, Hezhou University has adhered to the talent training goal of "solid foundation, broad caliber, strong ability, and innovation", vigorously promotes the reform of the supply side of higher education, strengthens the cooperation between schools and enterprises, and builds a base for teaching practice and collaborative education, carries out follow-up surveys on the employment of graduates, strengthens the feedback linkage between employment and professional setting and talent training, and continuously promotes the construction and healthy development of the three-way linkage mechanism of enrollment, training, and employment. This paper takes Hezhou University as an example to analyze the problems existing in the existing linkage mechanism, and proposes a construction method for the tripartite linkage mechanism of university enrollment, training and employment

## **2. Problems existing in the current tripartite linkage mechanism**

At present, universities and academic groups at home and abroad are actively exploring and building a long-term linkage mechanism of enrollment, training, and employment. However, with the national industrial transformation, domestic economic restructuring, and dynamic changes in the international economic development environment, most The construction of the integrated linkage mechanism of colleges and universities still cannot meet the requirements of current economic and social development for the cultivation of talents in colleges and universities. The following problems exist:

### **2.1. Unreasonable professional structure and enrollment plan**

Since my country's colleges and universities implemented enrollment expansion in 1999, the number of college students has continued to increase every year. Most colleges and universities ignore their own school-running conditions and school-running characteristics when enrolling students, and blindly pursue large and comprehensive majors. At the same time, when formulating the enrollment plan, it did not make timely adjustments according to the actual needs of economic and social development and industrial structure development, but based on "the composition of the teaching staff to determine the number of students enrolled." As a result, the degree of matching between professional setting and regional economic, social and industrial development is not high, talent training is out of touch with actual social needs, and the linkage between enrollment and employment is insufficient.

### **2.2. Single Talent training model**

First of all, most colleges and universities are influenced by the traditional school-running philosophy and mechanism. The talent training mode is too single and closed, ignoring the dynamic changes of economic and social development for different talents in economic and social development, and failing to give full play to the linkage role among schools, government and enterprises. Secondly, at present, colleges and universities pay attention to the teaching of theoretical knowledge, but neglect the cultivation of students' innovative and entrepreneurial ability and practical operation ability, which makes it difficult for students to apply theoretical knowledge to practice, to achieve the effect of learning and applying what they have learned. Finally, the current teaching team lacks enthusiasm for teaching reform, and fails to give full play to the role of the Internet and big data technology in the teaching of professional courses; and the single classroom teaching form cannot effectively improve students' comprehensive skills.

### 2.3. Incomplete employment service system

On the one hand, the enrollment, training, and employment departments of most colleges and universities are separated from each other, lack effective communication channels, and have not formed a virtuous circle of linkages between employment quality and employment status, enrollment plans, and talent training, and lack sound employment statistics and feedback mechanism. On the other hand, in the process of personnel training, the link of employment guidance has been ignored, and an accurate and all-round employment service system has not been formed.

### 3. Problems Construction of adaptive tripartite linkage mechanism

Aiming at the problem that the current talent training in colleges and universities is out of touch with the demand for talents in enterprises, under the background of the major strategic needs of national industrial transformation and upgrading, this paper takes the Industrial College of Hezhou University as an example, and relies on the model of "school-enterprise cooperation, production-education integration" to actively explore and construct a Tripartite Linkage Mechanism of enrollment, training and employment with the goal of "school as the main body, government as the lead, demand as the guide, and enterprises to participate together". The overall framework of the tripartite linkage mechanism is shown in Figure 1.

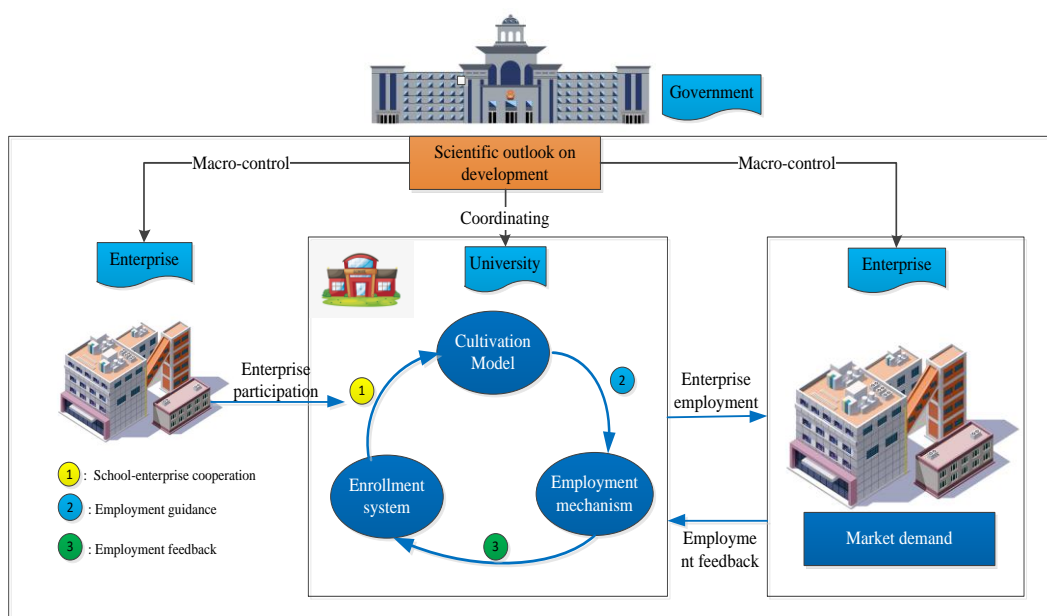


Figure 1: The framework of the tripartite linkage mechanism of enrollment, training and employment

### 3.1. Optimize the professional structure and dynamically adjust the enrollment number

#### 3.1.1. Actively meet the needs of the country and enterprises, and optimize the professional structure

At present, most colleges and universities are keen on popular majors, and pay little attention to unpopular majors with development potential, and blindly seek completeness rather than perfection in major setting, which intensifies the contradiction between supply and demand of talents. In view

of the above problems, we can make full use of the government's macro-control and market regulation and other means to dynamically adjust and optimize the professional structure setting, so as to reduce the contradiction between talent training and regional talent demand.

### 3.1.2. Construct a dynamic adjustment mechanism for enrollment plans that adapts to the needs of the country and enterprises

College enrollment needs to dynamically adjust the structure of enrollment majors and the number of enrollment in real time, so as to actively meet the needs of economic and social development. In order to achieve this goal, we can use field investigation, questionnaire survey, the Internet, big data analysis and other comprehensive means to obtain employment demand information, through the government coordination and market-oriented dynamic adjustment of the enrollment and training plan, so that the professional structure and the number of enrollment to meet the social needs.

## 3.2. Formulate and implement the collaborative education mechanism of school-enterprise cooperation and industry-education integration

### 3.2.1. Build a multi-functional innovation experimental base for ICT industry integration with the goal of cultivating applied and innovative talents

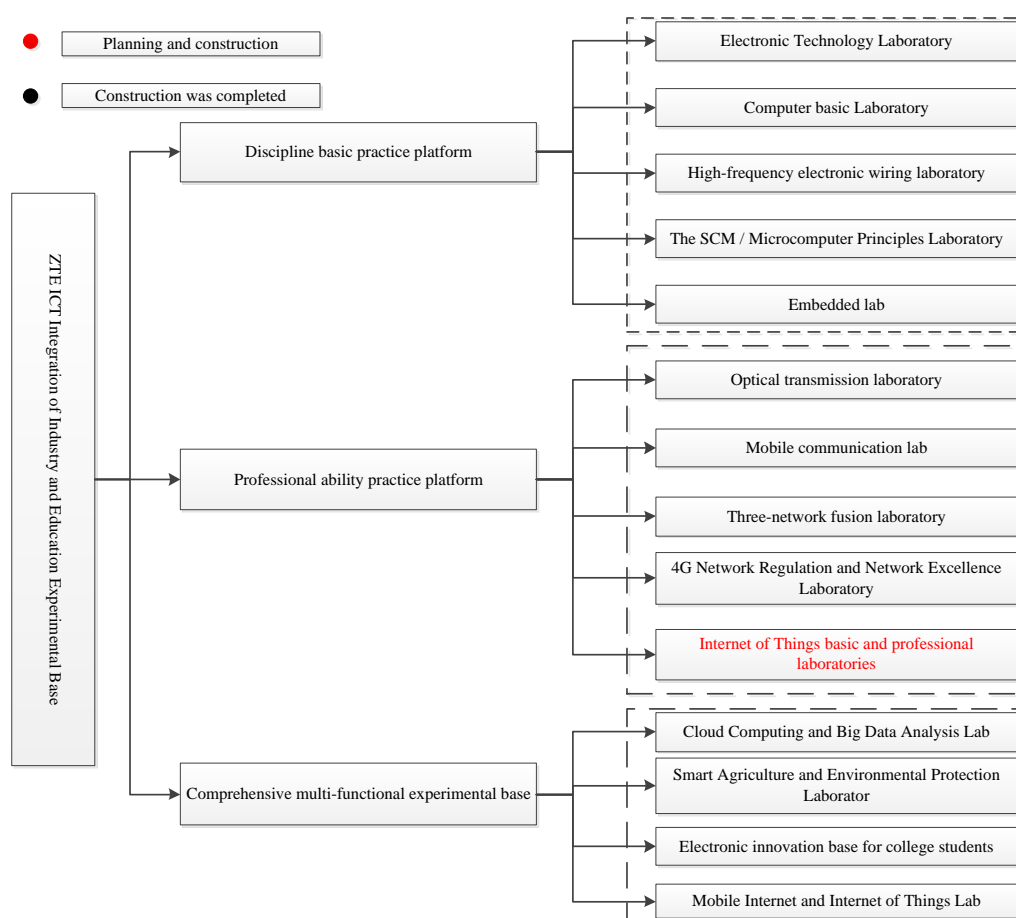


Figure 2: ICT industry and education integration innovation experimental base

In order to cultivate applied and innovative technical talents with outstanding engineering practice ability, Hezhou University uses school-enterprise cooperation resources to build a

high-standard professional laboratory integrating "experience, experiment, operation and maintenance, innovation, and entrepreneurship" to serve the talent demand of the high-tech industry [8]. The framework of the ICT industry-education integration innovation base is shown in Figure 2.

### **3.2.2. Explore the "three-way, three-in-one and two-top" school-enterprise cooperation talent training model for modern industries**

The implementation of the multi-disciplinary cross-fusion training mode is a beneficial attempt for colleges and universities to actively adapt to the needs of national economic and social development and to train high-quality and comprehensive talents for the country, which has become the trend of the reform of undergraduate education in colleges and universities. In order to cultivate application-oriented, compound and innovative talents and meet the society's requirements for the personal quality of talents, our school has carried out the reform of the talent training mode, and implemented the "three-way, three-in-one, two-top" school-enterprise cooperation talent training mode for modern industries. The content is as follows:

1) "Three-way" refers to the implementation of the integrated training in the first three semesters. According to the needs of the industry for talent capabilities, all majors break the boundaries of disciplines and majors in the first three semesters, implement the large-class enrollment, and the integrated training regardless of majors, so as to improve students' sustainable development ability, cultivate students' broad engineering foundation and professional ability, and adapt to the change of the dynamic adjustment of the national industrial structure reform.

2) "Three-in-one" refers to the implementation of school-enterprise cooperation and joint training in the middle three semesters. In order to cultivate students' professional competence, according to the requirements of regional industrial transformation and development for the practical ability of talent engineering, the cutting-edge scientific and technological innovation achievements of the industry are timely absorbed, and the school and enterprise engineers jointly offer technical courses close to the needs of the industry. In practical teaching, our school relies on ZTE ICT teaching platform and industry-education integration innovation and entrepreneurship base to carry out practical teaching, so as to achieve the goals of combining theory and practice, teaching process and production process, and integration of talent training and industrial needs.

3) "Two Top" refers to the last two semesters to arrange students for post internship. In the last two semesters of the undergraduate period, the university organizes students to complete the post internship and related graduation design. Among them, the content of students' graduation design is required to connect the internship content with each other, so as to exercise students' employment skills and practical ability.

### **3.2.3. Improve the collaborative education mechanism and build a school-enterprise cooperation "one course with two teachers" practical education mechanism**

College teachers have high professional level and rich theoretical knowledge, but their knowledge application ability and practical operation level is not high; while enterprise engineers have rich experience in engineering projects and strong practical ability. In order to improve the quality of talent training, our school relies on the mode of "integration of industry and education, school-enterprise cooperation", and adopts the practical teaching mode of "one lesson and two teachers" to effectively absorb the specialties of efficient teachers and enterprise technical personnel.

The specific implementation plan of the "one lesson and two teachers" mechanism is as follows: the teaching of the professional basic courses is jointly undertaken by the university teachers and the enterprise engineers. The explanation of theoretical knowledge points is dominated by teachers

in the school, and the practical experiment part is dominated by enterprise engineers. Teachers and enterprise engineers cooperate with each other to integrate enterprise elements into the whole process of course teaching, help students understand their professional and engineering background, and improve students' professional skills. At the same time, teachers in the school can use the on-site guidance of the training base to improve their practical guidance ability.

### **3.3. Build a real-time feedback mechanism for employment and improve the employment service system**

#### **3.3.1. Improve the feedback mechanism of employment status of college graduates**

Strengthen the follow-up investigation and feedback of the employment situation of graduates, and promote the reform of the school enrollment system and talent training mode with the feedback results. In the process of employment statistics, smooth feedback channels can be established through network survey and field research, and the important role of the Internet and big data in the feedback process can be fully played.

#### **3.3.2. Strengthen precise employment guidance services**

According to the needs of industrial structure transformation, it is also necessary to carry out employment guidance, career planning and employment practice through the process of talent training, so as to establish students' correct view of employment and career choice. On the one hand, by strengthening the contact and communication between colleges and universities and enterprises, and cooperating with enterprises in running schools, so as to establish an employment guidance system of interaction among schools, students and enterprises. On the other hand, we can make full use of the new model of "Internet + employment" to accurately grasp the information of graduates 'job-hunting intentions and enterprises' job needs, establish an accurate push employment service mechanism, and improve the recruitment and information push channels. In short, only by continuously providing high-quality employment services, scientific employment guidance, efficient information docking, and vigorously expanding employment channels, can we realize the connection between supply and demand, the matching of people and posts, and promote graduates to have more full and higher quality employment and entrepreneurship.

## **4. Conclusions**

Actively and effectively promote the research and practice of the three-in-one linkage mechanism of college enrollment, training, and employment. On the one hand, it caters to the demand for talents under the background of the national industrial structure adjustment strategy, and can effectively solve the problem of difficult employment of college graduates and alleviate social employment pressure; At the same time, it can promote the improvement of the quality of college enrollment, promote the deepening reform and adjustment of talent training models, improve the comprehensive strength of colleges and universities, and form a virtuous circle of employment, enrollment and training.

This paper analyzes the current situation of research on the three-way linkage mechanism of enrollment, training, and employment in colleges and universities in my country, as well as the existing problems in the construction of the linkage mechanism. And under the strategic background of national industrial upgrading and transformation, a new plan for the construction of a tripartite linkage mechanism was proposed. The proposal of this mechanism has certain reference significance for the reform of higher education under the background of industrial transformation.

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