

# An Analysis on the Cultivation of Innovative Talents in Local Universities from the Perspective of Knowledge Spillover

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**Abstract:** *In the era of knowledge economy, innovation is the inner driving force of social development, and talents are the foundation of innovation. Local universities, the important bases for local talents' training, can be regarded as important sources of local knowledge spillover because of their geographical location and knowledge production function. Based on the perspective of knowledge spillover, this paper analyzes the correlation between local universities and regional innovation, and explores the cooperation path between local enterprises and local universities to cultivate innovative talents, so as to make local universities, enterprises and the society get a good development cycle.*

**Keywords:** *knowledge spillover, local universities, innovative talents*

## 1. Introduction

### 1.1 The country's demand for innovative talents

Since the 20<sup>th</sup> National Congress of the Party, all walks of life in China have been guided by "high-quality development". People are working together and striving to promote Chinese-style modernization. The new scenes of construction and development can be seen everywhere in China. Innovation is an inexhaustible driving force for the development of a country and a nation. To maintain the momentum of construction and development, we must adhere to innovation as the driving force. In the report of the 20th National Congress, the innovation is emphasized as the first driving force. The report points out that education, technology, and talents are the basic and strategic support for comprehensively building of a modern socialist country, The country's development strategy needs a large number of innovative talents. Therefore, innovation-driven development is essentially talent-driven development. Under the unprecedented changes in the world, the country who has first-class innovative talents will have the advantages and dominance of construction and development. Giving full play to talents, the most active and positive factor in the innovative activities, can better achieve innovative development. As the main position of talent training, colleges and universities should assume the responsibility of cultivating innovative talents and actively meet the strategic needs of Chinese modernization.

### 1.2 Current situation of talent training in local universities

At present, many universities in China have set up the innovation and entrepreneurship colleges, offering innovative courses and cultivating students' innovative thinking and developing innovative ability. However, the relevant research shows that some local universities lack the analysis of local characteristics, industrial basis and their own conditions in the training process. They just blindly imitate famous universities and seek perfection. Local universities are the main part of China's higher education system, with the goal of serving local economic and social development, therefore the talent training should focus on the localities. Under the background of building an innovative country, the talent training of local universities should be based on the needs of local economic development. Then, the SWOT analysis can be used to carry out talent training strategy analysis, including the factors such as disciplinary characteristics, faculty status, student base, school-running orientation, resource endowment, governance structure, location characteristics and constraints of schools. Based on these, the local universities can establish a long-term mechanism of training innovative talents that conforms to its own characteristics.

## **2. The theory of knowledge spillover**

The concept of knowledge spillover was put forward in the 1960s. It means that the knowledge recipient integrates the acquired knowledge with its own knowledge to develop new knowledge, and the recipient does not bear the full cost consciously or unconsciously. Knowledge spillover is not only a result, but also a process. With the development of modern society, knowledge spillover plays an increasingly important role. Knowledge spillover can bring about a positive effect, thus get a large social benefit at a small social cost<sup>[1]</sup>. With the continuous spillover of knowledge, the benefits of regional innovation increase, which promotes the development of regional innovation system while local universities can be regarded as an important source of local knowledge spillover because of their clear functions of knowledge production and diffusion. Meanwhile, the knowledge spillover can be realized through two channels: human capital training and knowledge commercialization.

## **3. Analysis of correlation of related factors from the perspective of knowledge spillover**

### ***3.1 The correlation between knowledge spillover and local universities***

As an important institution of knowledge production and dissemination, local universities produces knowledge spillover effect in their discipline construction and personnel training. In terms of discipline construction, the level and influence of the discipline are enhanced by carrying out scientific research projects and promoting interdisciplinary integration. These activities not only produce a lot of new knowledge, but also promote the dissemination and application of knowledge, and play a positive role in promoting the development of local economy. In terms of talent training, knowledge is imparted to students through classroom teaching, practical teaching, social practice and other ways. After graduation, these students will go to all areas of society, promoting the dissemination and application of knowledge.

### ***3.2 The correlation between knowledge spillover and talent training***

Knowledge spillover and college personnel training are mutually promoting and interdependent. On the one hand, knowledge spillover can improve the quality of talent training. Through the communication and interaction with the social environment, teachers and students can be exposed to new ideas, theories and practical experience, so as to improve the teaching and practical ability. On the other hand, knowledge spillover can promote scientific research and innovation activities in universities. It can help teachers better understand the social needs and carry out practical application research. This can not only strengthen the scientific research strength of universities, but also promote the dissemination and application of knowledge. When the technological achievements of teachers and students are applied and recognized in society, they will have more opportunities to participate in practical projects, which forms a virtuous circle.

### ***3.3 The correlation between knowledge spillover and regional innovation ability***

Knowledge spillover is an important driving force of regional innovation. Regional innovation entities such as local universities, scientific research institutions and local enterprises realize knowledge sharing and diffusion through knowledge spillover, and promote technological innovation and industrial upgrading in the region. When a region improves its innovation ability by accepting knowledge spillover, there will be more and more regional knowledge accumulation, which provides possibilities and paths for knowledge spillover between different regions. At the same time of knowledge innovation in one region, new knowledge will also be learned and utilized by other regions under the effect of knowledge spillover, which will have an overall impact on local innovation activities.

## **4. Training suggestions of innovative talents in local universities from the perspective of knowledge spillover**

Talent training is a long-term project, and the cultivation of innovative talents in local universities needs the cooperation of the local government, enterprises and universities. The following suggestions are put forward from three aspects: local government, local universities and local enterprises.

#### **4.1 Local government**

##### **4.1.1 Build a social network communication platform**

Local government can help build a social network communication platform between enterprises and local universities, and promote the integrated development of industry, university and research in the form of achievement promotion meetings, talent exchange meetings and thematic seminars. Let enterprises participate in the talent training of universities, give guidance on the curriculum and talent training programs of universities. To replace the introduction of talents with joint training, the local government should encourage and promote the exchange and cooperation between enterprises and university personnel, build a social relationship platform, and help enterprises improve the ability to absorb the spillover of knowledge from universities<sup>[2]</sup>.

##### **4.1.2 Create a good institutional environment**

Local government can formulate relevant policies to give tax incentives and policy support to enterprises participating in university talent training. By providing some financial support, such as the scholarships and special funds, the local government can encourage college students to innovate and start their own businesses. Thus, a good atmosphere of innovation for the whole city can be created.

##### **4.1.3 Coordinate the operation of all parties**

In order to make the function of the main parties involved in talent training run smoothly, the government also needs to establish a good management mechanism. It can guide the site selection of enterprises, and clarify the positioning and responsibilities of universities and enterprises. Besides, it should mobilize the enthusiasm of all parties, play an intermediary role, coordinate all parties, reduce possible contradictions and conflicts, and promote the effective development of talent training cooperation. The government also needs to play the role of market supervision, implement intellectual property protection policies and increase investment in talent training.

#### **4.2 Local universities**

##### **4.2.1 Strengthen cultural identity**

Studies have shown that the higher the similarity of cultural background between universities and enterprises, the higher the effect of knowledge transfer will be.<sup>[3]</sup> The curriculum of local universities should reflect the culture of local enterprises, strengthen the cultural identity between each other, build common values and shared vision in the industry-university collaborative innovation network, gradually building a “cultural force”. Training innovative talents based on the cultural identity is conducive to enhancing mutual trust and consensus and achieving the goal of talent training.

##### **4.2.2 Reform the teaching and learning contents**

The curriculum of local universities should break the barriers of majors and disciplines, build an interdisciplinary and cross-professional classroom teaching platform, and bring the business philosophy, product research situation and urgent problems in production into the classroom. Through the combination of classroom teaching and production practice, students' awareness of innovation and entrepreneurship can be inspired and their innovation and entrepreneurship ability can be cultivated. The formulation of innovative talent training program also needs to break through the constraints of the traditional management system, so as to cultivate innovative talents in interdisciplinary disciplines.

##### **4.2.3 Build a dual-innovation network platform**

In the digital age, we should make full use of the network platform to strengthen communication. Local universities can build a network platform by virtue of intellectual advantages and human capital, invite local enterprises to join the platform, implement the dual construction of the knowledge base. University knowledge is more theoretical and original, while enterprise knowledge comes more from the market and practice<sup>[4]</sup>. Knowledge complementarity can be realized between the two sources which continuously provided for talent training. At the same time, the two parties communicate, exchange and discuss in a timely manner through the network platform, which also ensures the timely sharing of knowledge, and provides guidance for talent training.

### 4.3 Local enterprises

#### 4.3.1 Site construction

Geographical proximity is the essential element of knowledge spillover effect. Even with the wide application and popularization of Internet information technology, geographical proximity is still an important mechanism for knowledge spillover between universities and enterprises. If enterprises want to seize the frontier of science and technology and grow under the guidance of the latest theories, the site construction should be selected near the knowledge-intensive areas, such as university towns in regions, which can be conducive to further utilizing the knowledge spillover effect<sup>[5]</sup> and the cultivation of innovative talents needed by enterprises.

#### 4.3.2 Active participation

Enterprises should participate actively in the talents training in universities, keep close contact with them, reduce communication barriers, and promote the training of innovative talents. Whether from the perspective of the enterprises' own needs or in response to the needs of national policies, enterprises should actively play a guiding role. In the initial negotiation process with universities, it is necessary to fully discuss the supply and demand conditions of both sides and clarify their respective goals. By specifying the frequency and time and place of communication in advance, enterprises can make use of the joint network platform with the universities to carry out online and offline cross-contact, so as to maximize the value of time and obtain greater results with the lowest time, energy and cost as possible.

#### 4.3.3 Tutor selection

Nowadays, many local universities invite business tutors to the school to participate in talent training, but some of the selections are relatively superficial and arbitrary. Enterprises, first of all, need to make it clear that joint participation in talent training can accumulate human capital for enterprises. In the selection of tutors, the candidates' skills, knowledge and qualities should be emphasized, and comprehensive considerations should be made based on various factors such as staff years of work, job posts, educational background, etc. In the process of implementing the system, the selection mechanism should be regarded as a symbol of honor, so as to stimulate the motivation of employees to be hired as tutors.

## 5. Conclusion

The cultivation of innovative talents is the core of national education. To comprehensively promote the training of innovative talents in colleges and universities is not only the need of our country to participate in the competition of the world, but also an urgent and important strategic task to promote our modernization. In the current era of knowledge economy, the research on the cultivation of innovative talents in local universities based on the perspective of knowledge spillover is of great significance for promoting the development of higher education teaching reform in China, deeply exploring the training mechanism of innovative talents, and bravely carrying out education and teaching innovation.

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