

# An Interactive Study of Application-oriented Undergraduate Entrepreneurship and Innovation Talent Training for High-quality Development in the Pearl River Delta Region

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**Abstract:** Under the background of deepening the reform of higher education in China, the training of application-oriented undergraduate mass innovation talents has become an important issue in the field of education, especially in the economically developed Pearl River Delta region. Through the empirical research method, this study deeply discusses the interaction between the training of application-oriented undergraduate entrepreneurship and innovation talents and the high-quality development in the Pearl River Delta region. The research finds that the training of application-oriented undergraduate talents has significantly promoted the technological innovation and industrial upgrading in the Pearl River Delta region, and the high-quality development environment in the Pearl River Delta region has in turn provided rich practice platforms and resource conditions to continuously improve the training quality of application-oriented undergraduate talents. This study further explores the roles and collaborative mechanisms of universities, industries and governments in the process of mass entrepreneurship and innovation talent training, and puts forward a new model of interactive and win-win cooperation between talent training and local economic development, which has practical reference value for the economic and social development of the Pearl River Delta region.

**Keywords:** application-oriented undergraduate entrepreneurship, innovation talent training, high-quality development, Pearl River Delta region, scientific and technological innovation

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## Introduction

The purpose of this study is to explore how the "mass innovation and entrepreneurship" talents trained by colleges and universities can help local economic development. Taking the Pearl River Delta region, which is experiencing rapid economic development, as an example, mass entrepreneurship and innovation talents have played an important role in its scientific and technological innovation and economic upgrading, and also promoted the high-quality development of local economy. This study will examine the role of schools, industries and the government in the process of training mass entrepreneurship and innovation talents, so as to enlighten the win-win model of talent training and local economic development.

### 1. The current situation and challenges of training application-oriented undergraduate mass entrepreneurship and innovation talents

## **1.1 Theoretical and practical needs of application-oriented undergraduate entrepreneurship and innovation talent training**

The training of application-oriented undergraduate entrepreneurship and innovation talents is an important task that has both theoretical support and practical needs<sup>[1]</sup>. Theoretically speaking, the goal of application-oriented undergraduate education is to cultivate specialized talents with innovative spirit and practical ability, so that they can apply their knowledge to solve problems and create value in the real society. In the theory of mass innovation talent training, emphasis is placed on cultivating students' interdisciplinary ability, cooperative consciousness and innovative thinking to meet the requirements of social and economic development for talents.

In terms of practical demand, with the transformation and upgrading of China's economy and the implementation of the innovation-driven development strategy, the Pearl River Delta region needs a large number of talents with practical ability and innovative spirit to support the region's high-quality development. The training of application-oriented undergraduate mass innovation talents can meet the demand of the Pearl River Delta region for innovative enterprises and technology-based projects, and promote the growth and sustainable development of the regional economy.

## **1.2 Training status of application-oriented undergraduate entrepreneurship and innovation talents in the Pearl River Delta region**

The Pearl River Delta region has made some achievements in the training of application-oriented undergraduate entrepreneurship and innovation talents. Higher education institutions have fully considered the training needs of application-oriented undergraduate mass innovation and innovation talents in the adjustment of major Settings and curriculum systems, and actively set up majors and courses related to innovation and entrepreneurship. In terms of teaching methods and teaching resources, colleges and universities pay attention to practical teaching and project practical training, providing rich opportunities for entrepreneurial practice and resource support. Colleges and universities also actively cooperate with enterprises and research institutions to build platforms for innovation and entrepreneurship and provide practical and internship opportunities for students<sup>[2]</sup>.

There are still some problems and challenges in the training of application-oriented undergraduate mass innovation talents in the Pearl River Delta region. The construction of teaching staff in colleges and universities needs to be strengthened, and there is a shortage of teachers with practical experience and entrepreneurial experience. The traditional education model and evaluation system still exist, and the cultivation of students' practical ability and innovative ability is not paid enough attention to. The cooperation between universities and enterprises and industries still needs to be deepened, and the construction of cooperation mechanisms and platforms is not perfect.

## **1.3 Main challenges faced by application-oriented undergraduate entrepreneurship and innovation personnel training**

Application-oriented undergraduate entrepreneurship and innovation personnel training is facing a series of challenges. Colleges and universities need to work closely with enterprises and industries to understand the actual needs and adjust the professional offering and curriculum system. Colleges and universities need to reform their education and teaching models, focus on cultivating students' practical ability and awareness of innovation, and provide more practical opportunities and resource support<sup>[3]</sup>. The construction of the teaching staff is also an important challenge, and universities need to attract more teachers with practical and entrepreneurial experience to participate in the training of mass entrepreneurship and innovation talents.

In addition to the internal challenges, there are also some external challenges that universities need to face. The change of social cognition and values is a challenge, the traditional idea that reading is the only way out, and the recognition of cultivating innovative and entrepreneurial talents still needs to be improved. The lack of investment and policy support is also a challenge, which requires the government to increase input and policy support for the training of

mass entrepreneurship and innovation talents.

To address these challenges, universities, enterprises and the government need to work together. Colleges and universities should strengthen cooperation with enterprises and industries, adjust major offerings and curriculum systems, reform education and teaching models, and strengthen the construction of teachers. Enterprises should provide more practical opportunities and resource support to participate in the training of mass entrepreneurship and innovation talents. The government should increase investment in the training of mass entrepreneurship and innovation talents, introduce relevant policies, and provide policy support and incentives. Through multi-party cooperation, we should jointly promote the development of application-oriented undergraduate entrepreneurship and innovation personnel training, and provide strong support for the high-quality development of the Pearl River Delta region.

## **2. Interactive analysis of application-oriented undergraduate entrepreneurship and innovation talent training and high-quality development in the Pearl River Delta region**

### **2.1 The impact of application-oriented undergraduate talent training on high-quality development in the Pearl River Delta region**

In the face of fierce market competition and the trend of economic globalization, the Pearl River Delta region, as an important engine of national economic development, is significantly inclined to application-oriented undergraduate entrepreneurship and innovation talents in the talent training strategy. Such talents have a solid theoretical foundation and strong practical ability, and possess innovative thinking and entrepreneurial spirit. They can not only provide forward-looking strategic suggestions for enterprises, but also quickly adapt to the technical skills required by the position; Not only can they exert their subjective initiative and take the initiative to create value for the society, but also can flexibly adapt to social changes and improve their competitiveness.

On the one hand, their innovation ability can not only enhance the competitiveness of enterprises, improve the speed of industrial upgrading in the Pearl River Delta region, and stimulate the economy. Second, their entrepreneurial spirit can promote a new round of economic development and inject more vitality into the PRD region.

### **2.2 Feedback of high-quality development in the Pearl River Delta region on the training of application-oriented undergraduate talents**

The feedback forms of high-quality development in the Pearl River Delta region on the training of application-oriented undergraduate talents are various, which reflects the changes in the demand of local economic and social development for mass innovation talents in colleges and universities, and also affects the way and direction of undergraduate talent training.

#### **2.2.1 Changes in the demand for undergraduate entrepreneurship and innovation talents for high-quality development in the Pearl River Delta region**

As the Pearl River Delta region continues to move towards a high-end industrial structure, the demand for application-oriented undergraduate entrepreneurship and innovation talents is also changing. In the past, the PRD needed more skilled talents, but now there is a growing demand for those with innovative thinking and entrepreneurial ability. Especially in emerging industries and strategic emerging industries, there is a great demand for application-oriented undergraduate mass innovation talents with forward-looking skills and innovative ideas.

This change in demand poses new challenges for the training of application-oriented undergraduate entrepreneurship and innovation talents, requiring higher education institutions to learn and adapt to changes in the social and economic environment, adjust personnel training programs, focus on innovation and entrepreneurship education, and cultivate more entrepreneurship and innovation talents that meet the requirements of high-quality local development.

## **2.2.2 The impact of high-quality development in the Pearl River Delta region on the training mode of undergraduate entrepreneurship and innovation talents**

On the other hand, the high-quality development of the Pearl River Delta region and the continuous optimization and upgrading of its industrial structure have put forward higher requirements for talent training methods. For college students, theoretical knowledge and technical skills alone are not enough, they also need to understand the actual operation of enterprises, master industry dynamics, and have the ability to cooperate across borders.<sup>[4]</sup> This requires the reform of undergraduate talent training mode, strengthening the cooperation between industry, university and research, and implementing the deeply integrated talent training mode.

This mode reform enables college students to have more access to advanced industrial technology, understand market demand, be familiar with enterprise operation, and exercise practical operation ability. This not only meets the demand for high-quality talent development in the Pearl River Delta region, but also benefits students and enhances their employment competitiveness.

## **2.2.3 The impact of high-quality development in the Pearl River Delta region on the training goals of undergraduate mass entrepreneurship and innovation talents**

The high-quality economic development in the Pearl River Delta region has an important impact on the final employment direction and career development of college students. Driven by high-quality development, the Pearl River Delta pays more and more attention to the introduction of talents, which provides a broad stage for the graduation of application-oriented undergraduate mass innovation talents.

In this regard, higher education institutions are required to make clear the training goals of mass entrepreneurship and innovation talents in the future, and strive to cultivate mass entrepreneurship and innovation talents to meet the needs of high-quality development in the Pearl River Delta region. On the other hand, undergraduates should pay attention to understand and master the actual needs of actual enterprises and industries, especially the technological development trend of emerging industries, so as to improve their employment competitiveness and achieve close integration with the high-quality development of the Pearl River Delta region.

## **2.3 Coordination mechanism between mass innovation and innovation talent training and high-quality development of local economy**

The training of mass entrepreneurship and innovation talents and the high-quality development of local economy is a dynamic interactive process, during which the coordination mechanism is reflected in the promoting effect of talent training on economic development on the one hand, and the feedback effect of economic development on talent training on the other hand.<sup>[5]</sup> In the former case, the training of application-oriented undergraduate mass entrepreneurship and innovation talents can continue to provide fresh blood and continuous impetus for the Pearl River Delta region, further enhance its strength in various fields, and promote the high-quality development of local economy. The latter, the rise of emerging industries such as the Internet and big data brought about by high-quality development will further increase the demand for application-oriented undergraduate entrepreneurship and innovation talents, thus affecting their better training.

In general, the training of application-oriented undergraduate mass innovation and innovation talents has a positive interaction with the high-quality development of local economy. The former provides vitality and impetus to the latter, while the latter gives positive guidance and feedback to the former, so as to continuously promote the collaborative progress of the two.

## **3. The training of application-oriented undergraduate entrepreneurship and innovation and the high-quality development mode of local economy based on the win-win situation**

### **3.1 The role of universities in the training of mass entrepreneurship and innovation talents and the high-quality development mode of local economy**

As the main training place for mass entrepreneurship and innovation talents, universities have a decisive impact on the training of application-oriented undergraduate mass entrepreneurship and innovation talents. As a place to acquire knowledge and skills, universities can provide opportunities for both theoretical learning and practical operation for entrepreneurship and innovation talents. Universities usually have fortunate conditions, a concentration of high-quality teaching staff and rich learning resources. Universities can also promote deep cooperation with society and enterprises to provide students with a platform for practice and innovation.

The driving force of universities for high-quality local economic development is mainly reflected in the fact that they cultivate mass innovation talents with innovative spirit and practical ability, and provide talent support for industrial upgrading. Universities themselves are also an important part of local economic development, and their scientific research capabilities and technological transformation capabilities can all contribute to the improvement of local economic quality.

### **3.2 The role of the industry in the training of mass entrepreneurship and innovation talents and the high-quality development mode of local economy**

As the main battlefield for the practice and innovation of mass entrepreneurship and innovation talents, the industry has a great influence on the training of application-oriented undergraduate mass entrepreneurship and innovation talents. The industry needs continuous innovation to cope with market changes, and as the main force of innovation, mass innovation talents can play an important role.

On the other hand, the industry's driving force for the high-quality development of local economy is mainly reflected in guiding and providing in-depth development opportunities for mass innovation talents, and providing a source of innovation for local economic development. The industry also needs to establish a close cooperative relationship with educational institutions such as universities to jointly cultivate mass entrepreneurship and innovation talents to meet the needs of the industry.

### **3.3 The government's role in the training of mass entrepreneurship and innovation talents and the high-quality development model of local economy**

As the main body of social governance, the government plays an important role in promoting and guiding the training of mass entrepreneurship and innovation talents and the high-quality development mode of local economy. Through effective policy guidance, the government can provide an environment conducive to the development of mass entrepreneurship and innovation talents, such as establishing a talent training mechanism, providing a platform for innovation and entrepreneurship, and promoting in-depth cooperation between the industry and education.

Similarly, the government's driving force for high-quality local economic development is mainly reflected in creating a favorable environment for industrial development, launching and guiding innovative projects, providing scientific and technological and financial support, and formulating and implementing policies and regulations that adapt to the development of The Times.

In general, universities, industries and the government all play a key role in the training of application-oriented undergraduate mass innovation talents and the high-quality development model of local economy. Under the premise that universities lead the transfer of knowledge and skills, the industry promotes practice and innovation, and the government provides support and services, only when all parties work together can a dynamic and balanced win-win model be formed, so as to better promote the high-quality development of the Pearl River Delta region.

## **4. Closing remarks**

Through the in-depth discussion of this study, there is obvious interaction between the training of application-oriented

undergraduate mass entrepreneurship and innovation talents and the high-quality development of the Pearl River Delta region. The training of application-oriented undergraduate entrepreneurship and innovation talents has played a positive role in promoting the high-quality development of the Pearl River Delta region by promoting the technological innovation and industrial upgrading in the region. And the high-quality development environment in the Pearl River Delta region also effectively provides scientific and technological practice and innovation resources, which further improves the training quality of application-oriented undergraduate entrepreneurship and innovation talents. The roles and collaborative mechanisms of universities, industries and governments in the training process have built a new model of interactive and win-win cooperation between talent training and local economic development. However, we can also see that there are still some challenges in the process of training application-oriented undergraduate entrepreneurship and innovation talents, such as the exploration of the docking mode between universities and industries, and the balance between the demand and supply of entrepreneurship and innovation talents. These need to be further explored and solved by future research. In-depth theoretical research can help to continuously improve the policy environment, promote the upgrading of practical actions, and finally achieve a win-win situation of high-quality development and talent training in the Pearl River Delta region. In general, this study provides a theoretical basis and practical reference for understanding the relationship between application-oriented undergraduate entrepreneurship and innovation talents and local high-quality development, optimizing the talent training model and building a new model of high-quality development. It is hoped that future studies can further carry out in-depth discussions on the basis of this study.

### **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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