

# *Practice and Exploration of the "Research, Innovation and Service" Talent Training Model for Environmental Majors in Higher Vocational Education*

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**Abstract:** In today's rapidly developing society, creating a harmonious and civilized society has become the mainstream value concept. As an important position for cultivating applied talents and serving society, vocational colleges should establish a sense of "research, innovation and service" talent cultivation, in order to improve the comprehensive quality of talents. Based on this, this paper starts from the significance of practicing the "research, innovation and service" talent cultivation mode in vocational environmental majors, analyzes in depth the problems that may be encountered in the development of this mode, and explores how to better promote the "research, innovation and service" talent cultivation mode in vocational environmental majors.

## **1. Introduction**

As one of the important components of higher education in China, vocational education should cultivate talents who not only possess high theoretical literacy, but also possess professional practical skills and innovative abilities. Especially as China's society enters a period of rapid development, there is an increasing emphasis on social development and environmental remediation, resulting in an increasing demand for talents in environmental majors. In this context, vocational colleges must further innovate talent cultivation models, cultivate environmental professionals with strong innovation awareness, solid theoretical foundation, and excellent professional skills, in order to better serve society. How to better carry out the "research, innovation and service" personnel training mode in vocational environmental majors and promote high-quality training of vocational environmental professionals has become a problem that must be explored in the current talent cultivation of vocational environmental majors.

## **2. The Significance of Practicing the "Research, Innovation and Service" Talent Training Model for Environmental Majors in Higher Vocational Education**

The "research, innovation and service" talent cultivation model for environmental majors in higher vocational education is of great significance for the development of higher vocational education and the further improvement of the comprehensive quality of environmental professionals. This paper analyzes the practical significance of the "research, innovation and service" talent

training model for environmental majors in vocational colleges from the following three points.

### **2.1. Cultivating Professional Talents Required for Social Development**

The "research, innovation, and service" talent training model for environmental majors in vocational colleges places more emphasis on cultivating students' practical and innovative abilities compared to traditional education models. This model can enable students to utilize a comprehensive practical platform under the "research, innovation, and service" model in the process of learning knowledge, and be exposed to a more realistic work environment, thereby improving students' ability to apply and practice knowledge. [1] In addition, the "research, innovation, and service" talent cultivation model for environmental majors in vocational colleges can actively guide and encourage students to participate in practical projects and carry out scientific research and innovation practices on this basis, thereby meeting the current demand for environmental talents in society, allowing environmental professionals in vocational colleges to further play their value and actively participate in China's development cause.

### **2.2. Promoting the Combination of Vocational Education and Industrial Demand**

The further implementation of the "research, innovation, and service" talent cultivation model for environmental majors in vocational colleges can effectively promote cooperation between universities, enterprises, research institutions, and the industry, thereby providing more opportunities for environmental majors in vocational colleges to participate in scientific research projects and exercise their practical abilities. In addition, the "research, innovation, and service" talent training model in vocational colleges can also strengthen cooperation with the outside world. Colleges should deeply grasp and understand the current development direction and dynamic needs of the environmental industry, and adjust talent training goals and plans in a timely manner. It can provide effective support for cultivating talents that meet the development needs of the environmental industry.

### **2.3. Improving Students' Comprehensive Quality and Promoting Education Transformation and Development**

The "research, innovation, and service" talent cultivation model can improve students' comprehensive quality and promote the transformation and development of education. On the one hand, this model can provide students with a rich practical platform, allowing them to hone themselves in practical work and promote the improvement of their overall quality. In addition, the implementation of the "research, innovation, and service" talent cultivation model can also promote the transformation and development of vocational environmental education towards social needs, and promote a fundamental transformation of the educational concept of vocational environmental education; While strengthening industrial cooperation, this model can continuously improve the quality of the profession itself and the level of social services, thus making the establishment of environmental majors in vocational colleges more practical.

## **3. Difficulties in the Implementation of the "Research, Innovation, and Service" Talent Training Model for Environmental Majors in Higher Vocational Education**

Although the implementation of the "research, innovation, and service" talent training mode in vocational environmental majors has profound significance for professional development and talent cultivation, there are still many problems in the implementation process of the profession. The

problems seriously hinder the implementation of the "research, innovation, and service" talent training mode in vocational environmental majors.

### **3.1. Unclear Requirements for Talent Cultivation in Research and Innovation Services, Unclear Positioning of Talent Cultivation**

To construct a "research, innovation, and service" talent cultivation model for environmental majors in vocational colleges, scientific research and evaluation should be conducted on the integration of teaching and research in environmental majors in vocational colleges firstly. Additionally, systematic research should be conducted on the teacher and student groups, environmental enterprises, and relevant research institutions in vocational colleges to obtain specific requirements for the construction of a "research, innovation, and service" talent cultivation model through analysis. However, in the current talent cultivation models of many vocational colleges, they only blindly refer to other colleges to carry out the "research, innovation, and service" talent cultivation model, without conducting in-depth analysis of cooperation related environmental enterprises, environmental related scientific research, and integration of science and education from their own colleges. In addition, many vocational colleges do not learn from the advanced experience of other colleges when carrying out the "research, innovation, and service" talent cultivation model. When analyzing the survey results, the analysis of data is not objective and comprehensive enough, making it difficult to provide specific guidance for the construction of the "research, innovation, and service" model. This makes the positioning of the "research, innovation, and service" talent cultivation in vocational environmental majors unclear; the training objectives are not clear, and the training requirements are not specific.

### **3.2. Insufficient Efficiency in the Transformation of Scientific and Technological Achievements, and Inadequate Construction of the "Research, Innovation, and Service" Talent Training Model**

The construction of the "research, innovation, and service" talent cultivation model should fully utilize scientific research to promote innovation, enhance students' innovation awareness through innovative practical activities, and better serve society. However, the current transformation output of scientific research achievements in environmental majors in vocational colleges is relatively low, and it is not enough to be applied to specific practical scientific research achievements. On the one hand, vocational colleges have insufficient funding for scientific research, making it difficult to carry out in-depth scientific research activities. In addition, vocational colleges have weak research conditions and lack cooperation with relevant environmental research units, further exacerbating the difficulty in producing scientific research results, making it difficult to achieve research and innovation in relevant environmental professional fields. On the other hand, many environmental majors in vocational colleges only focus on theoretical teaching and neglect the cultivation of students' innovation and entrepreneurship abilities. They do not conduct a specific in-depth investigation and analysis of the current status of scientific research, entrepreneurship and social services in vocational colleges, and do not rely on existing school enterprise cooperation platforms and policies to carry out innovation and entrepreneurship practical activities. This makes it difficult for students to have certain innovative achievements. It is difficult for students to serve society with their own innovative achievements.

### **3.3 Insufficient Implementation of Fundamental Educational Tasks and Inadequate Establishment of Students' Social Service Awareness**

In the context of education in the new era, the fundamental task of cultivating morality and talents must also be implemented, in order to build a "research, innovation, and service" talent cultivation model for environmental majors in vocational colleges. In the entire process of carrying out relevant scientific research projects and innovative creative activities, ideological and political education must be fully utilized to cultivate students' moral literacy and research spirit. However, in current vocational colleges, the focus on environmental knowledge and theoretical education in environmental majors is solely on "research, innovation, and service", without truly integrating ideological and political courses into "innovation and entrepreneurship" education. Students find it difficult to recognize the important role of environmental professionals in the current sustainable development of society. Even though students have achieved certain innovative results through participating in scientific research and innovation and entrepreneurship activities, it is difficult for students to establish a sense of social service to serve the innovative results in society, resulting in an incomplete construction of the "research, innovation, and service" talent cultivation model, due to the lack of professional ethics.

## **4. Practice and Exploration of the "Research, Innovation, and Service" Talent Training Model for Environmental Majors in Higher Vocational Education**

To promote the further development of the "research, innovation, and service" talent training model for environmental majors in vocational colleges, practical exploration must be carried out from multiple perspectives.

### **4.1. To Clarify Talent Training Objectives and Refine Relevant Social Services**

Higher vocational environmental majors must develop talent training goals that are in line with the actual situation of the school. On the one hand, it is necessary for the decision-makers of talent cultivation goals to go to the front line of the environmental industry to understand the new technologies and concepts in the current environmental industry, and formulate reasonable goals based on the actual situation of the school. On the other hand, the goal of talent cultivation should be based on promoting the comprehensive development of students' comprehensive qualities as the primary premise, and on improving the cultivation of students' theoretical knowledge, practical ability, and innovative ability as the benchmark. Secondly, vocational colleges should refine social services and establish the scope of social services for environmental majors in vocational colleges, and utilize the talent advantages of vocational colleges to provide talent support for the environmental industry. In addition, in-depth analysis should be conducted on the integration of teaching and research in environmental majors in vocational colleges, and the actual situation of environmental industries and research units should be carefully investigated. After sorting out the research results, the correct talent positioning should be formed to ensure that the "research, innovation, and service" talent training mode for environmental majors in vocational colleges can be scientifically carried out. [2]

### **4.2. To Accelerate the Industrialization of Scientific and Technological Achievements and Build a "Research, Innovation, and Service" Talent Training Model**

It's necessary to accelerate the industrialization and transformation of scientific and technological achievements in environmental majors, and build a talent training model of "research,

innovation, and service". On the one hand, vocational environmental majors should closely follow the pace of integration of industry and education, strengthen cooperation with relevant industries and research institutions, and strengthen the three-party education mechanism of schools, enterprises, and research institutions. While improving students' innovation ability, they should promote the transformation and upgrading of industrial structure, and accelerate the industrialization process of scientific and technological achievements. On the other hand, higher vocational environmental majors should take "research" as the driving force, closely grasp the emerging scientific research projects of environmental majors, and promote "innovation" through "research". Colleges can carry out innovative research open projects, use scientific research as the carrier and project content as the driving force, fully utilize colleges innovation and entrepreneurship policies, and actively encourage and guide students to participate in practical projects of innovation and entrepreneurship in environmental majors. By constructing the "Internet plus Environment Professional Innovation Project", students can exercise their innovative abilities and form their own innovative achievements in the specific practical process, thereby establishing an innovative awareness. By selecting high-quality "Internet plus" environmental professional innovation projects and matching mentors for assistance, the project can be further incubated, so as to apply the innovation results to specific social services. Finally, we should also promote "service" by promoting innovative projects and the latest scientific research achievements, cultivating innovative talents, and better serving society and enterprises.

#### **4.3. To Implement the Fundamental Task of Cultivating Morality and Cultivating People, and Establish Students' Awareness of Social Service**

We should implement the fundamental task of cultivating morality and cultivating people, and establish students' awareness of social service. It is necessary to integrate ideological and political education into the entire process of innovation and entrepreneurship education, in order to improve students' ideological and moral qualities and scientific and cultural qualities, so that they can develop a resilient and persistent scientific research spirit in the process of participating in scientific research projects, enhance their innovation and entrepreneurship abilities in the process of innovation and entrepreneurship practice, and thus cultivate a sense of social responsibility. Secondly, we should carry out practical projects for environmental majors, to integrate social service awareness and ideological and political education into the curriculum. Through practical activities, it enables students to understand the importance of environmental majors for social development. Finally, we should also set an example by selecting a group of students or mentors with excellent social service awareness, enhancing students' sense of identification with social services, enabling them to use their innovative achievements to solve prominent contradictions in the ecological environment, and establish their own environmental industry to devote themselves to the governance of the ecological environment. Thus, students can carry out their environmental protection mission, utilize their professional knowledge, promote their innovation awareness, and contribute to the sustainable development of our country.

#### **5. Conclusion**

In summary, in order to carry out the "research, innovation, and service" talent cultivation model in vocational environmental majors, it is necessary to optimize the curriculum system of environmental majors, establish a comprehensive "research, innovation, and service" talent cultivation system, and carry out a series of innovation and entrepreneurship education. Starting from multiple directions and perspectives, only in this way can the "research, innovation, and service" talent training model be effectively implemented in vocational environmental majors.

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