# Analysis of Scientific Research Projects in Newly Promoted Vocational Colleges--Taking a Health Vocational College in Northern Jiangsu as an Example

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**Keywords:** Scientific research project; Project approval; Statistical analysis

**Abstract:** Through the statistical analysis of the scientific research projects in a health vocational college in northern jiangsu province from 2006 to 2012, this paper aims to understand the current situation of scientific research in newly promoted vocational colleges, and put forward Suggestions for promoting the development of scientific research work.

### 1. Introduction

At the beginning of this century, a number of secondary professional schools in China were transformed into higher vocational education colleges, which became part of higher education. It is necessary for the development of new vocational colleges to carry out scientific research and improve the level of scientific research. This paper makes a statistical analysis of the scientific research project data of a health vocational college in northern jiangsu province since its promotion in 2006, to understand the current situation of scientific research work in such new vocational colleges, and to discuss the countermeasures to improve the level of scientific research work.

The data of this study are based on the archived data of scientific research of science and technology department of a health vocational college in northern jiangsu province. The statistical period is from 2006 to 2012, including the establishment of various scientific research projects of this college. Provincial projects refer to provincial science and technology department fund projects, provincial social science fund projects and other departmental projects; Municipal project approval refers to the project approval by the municipal government and other bureaus; Institution-level project approval refers to projects approved by various societies and projects independently approved by colleges.

## 2. Statistical Results and Analysis

## 2.1 Research Project Level and Funding Status.

After upgrading, the college has obtained a total of 432 scientific research projects, including 2 national natural science foundation projects, 127 provincial projects, 90 municipal projects and 213 university-level projects. In the first four years of the promotion, school-level project approval dominated, accounting for more than half of the total projects. In 2006, school-level project approval accounted for the highest proportion, 76%, and from 2007 to 2009, 61%, 67% and 56% respectively. From 2010 to 2012, on the basis of the continuous increase in the total number of projects approved, the number of projects approved at the hospital level was relatively reduced, while the number of projects approved at the municipal level and the provincial level was gradually increased, and the number of projects approved above the municipal level was 36, 51 and 52 respectively. Breakthroughs have been made in national and provincial scientific research projects, one national natural science foundation youth fund and one general project each, and one Natural science foundation of jiangsu province and one social science foundation of jiangsu province each, with a funding fund of RMB 1.3 million yuan.

DOI: 10.25236/icem.2019.029

# 2.2 Types of Research Projects.

The statistical analysis of research types of scientific research projects shows that:

Before 2011, it mainly focuses on humanities and social science research and education science research, accounting for 73.33% of the total number of scientific research projects, and 61.22% of the total number of scientific research projects; In 2011 and 2012, the number of natural science research projects increased, accounting for a steady increase of 48.65% and 52.94%, respectively.

Natural science research is the main source of scientific research projects approved at or above the municipal level, accounting for a relatively high proportion, the lowest being 38% in 2011, the highest being 63.63% in 2006, and the remaining remaining around 55%.

Natural science research projects have received higher funding than humanities and social sciences and educational science research projects over the years, with a total funding of RMB 1,787,500 yuan, accounting for 80.77% of the total funding from the higher level, and humanities, social sciences and educational science research only accounting for 19.23%.

# 2.3 Age and Title Distribution of Scientific Research Project Leaders.

The age and title of the first person in charge of the project were analyzed statistically. The results showed that:

Young and middle-aged teachers under the age of 45 are the backbone of scientific research. Young teachers under the age of 35 approved 112 projects, accounting for 25.93% of the total number of projects, which basically showed an increasing trend year by year, and the increase rate increased after 2010, reaching 30 projects at the highest. The number of teachers aged between 35 and 45 remained stable, with more than 20 projects each year, totaling 166 projects, accounting for 38.43% of the total number of projects. Teachers over the age of 45 set up relatively few projects, the least in 2006 with 12 projects, and the most in 2011 with 27 projects.

In the first person in charge of scientific research projects, the number of deputy senior personnel is the largest, accounting for an absolute advantage of 243, accounting for 58.56% of the total scientific research person-time; Intermediate professional title personnel followed by 96, accounting for 22.22%; There are relatively few senior and junior staff, 43 and 40 respectively, accounting for about 1% each.

#### 3. Think and Discuss

### 3.1 Current Status of Scientific Research Projects.

In order to ensure the development of scientific research, the college has formulated or revised the "rules for the examination of scientific research work", "measures for the management of scientific research work", "interim provisions for the establishment of national, provincial and ministerial projects" and other incentive measures, encouraging teachers to carry out scientific research work, with remarkable results. After upgrading, the number of projects approved by higher vocational colleges increased year by year, the structure of scientific research projects tended to be reasonable, and the scientific research funds increased year by year. Young and middle-aged researchers under the age of 45 with intermediate and deputy senior titles are the main forces in scientific research, and the number and level of projects approved are relatively high. The team of scientific research personnel with junior titles has grown from nothing, and their scientific research capacity has been improved. The number of projects approved has been increasing, but the majority of projects are approved at the college level, and the number of scientific research projects approved above the municipal level is not large, which may be related to their limitations of scientific research ability, research background and professional title. Scientific research projects in newly promoted colleges and universities are mainly at the level of departments, bureaus and colleges. Although breakthroughs have been made in high-level scientific research projects, such as the national natural science foundation, provincial natural science foundation and provincial social science foundation, the absolute number is still very small. In scientific research projects, there are many basic research and educational research, but few applied research.

# 3.2 Suggestions on Strengthening Scientific Research in Higher Vocational Colleges.

Scientific research project is an important indicator to measure the development level of scientific research work, and also an important source of scientific research output.

Strengthening scientific research projects is an important measure to promote the further development of scientific research level in new vocational colleges. In order to further improve the quantity and quality of scientific research projects, the following Suggestions are put forward.

Pay attention to the training of teachers' scientific research ability, especially the training of young teachers. Teachers in higher vocational colleges are mainly undergraduates and postgraduates, and most of them have no independent experience in scientific research. Therefore, teachers should be actively trained in research theories, methods, project declaration and other relevant knowledge through various forms of education, so as to fundamentally strengthen teachers' scientific research awareness and improve their scientific research quality.

Give full play to the leading role of academic leaders and strengthen the construction of scientific research teams. Higher vocational colleges should implement the talent strategy, consciously select and train a group of academic leaders, set up scientific research teams around these leaders, cultivate research direction, and strive for high-level scientific research projects and achievements. We will give full play to the role of academic leaders in guiding young teachers, so that young teachers will have the opportunity to master the basic methods and procedures of scientific research in practice, enrich their scientific research backgrounds, and reserve talents for scientific research.

Strengthen scientific research management and improve the quality of scientific research results. Under the background of limited subject sources, scientific research managers in higher vocational colleges should strengthen their own learning, master the management methods and policy documents of various scientific research projects at all levels, organize scientific research activities in schools in a planned way, guide teachers to accurately locate and apply for various projects, and improve the success rate of application. At the same time, strengthen the process control and supervision of project establishment, improve the quality of scientific research results, and promote the in-depth and continuous development of scientific research projects.

Strengthening the construction of scientific research platform, optimizing the resources distribution of scientific research, important way to improve the efficiency of investment in science and technology in higher vocational colleges according to the professional advantages, combined with local social development needs, strengthen the construction of science and technology innovation platform, such as institute of technology (engineering) research center, key laboratory of science and technology innovation service training base of university science park, which is based on science and technology innovation platform, such as integrate research resources, gathering excellent innovative talents, and direction in the field of forming characteristics, actively take science and technology research and development projects and research topics, constantly improve the technological innovation ability.

Strengthen the cooperation and exchanges with other colleges, undergraduate colleges, enterprises and public institutions in combination with the construction of characteristic specialties of the college, seek cooperation opportunities for high-level basic research, and actively guide teachers to carry out applied research on practical technologies. The essential characteristic of higher vocational colleges is to train highly skilled and application-oriented talents. By strengthening the cooperation and exchanges with other colleges, undergraduate colleges, enterprises and institutions, we can make up for the lack of scientific research strength of higher vocational colleges, realize resource sharing, complement each other's advantages, promote the development of applied research, and comprehensively improve the scientific research level of higher vocational colleges.

### References

[1] Z.F. Zhang, Y.J. Xu and Z.H. Li. Statistical analysis of funding of scientific research projects in

- our hospital from 2000 to 2006, J. Medical Information, Vol. 5 (2010) No.6, p. 1359-1360. (In Chinese)
- [2] Y.L. Zhong. Current situation and countermeasures of scientific research in higher vocational colleges, J. Education Theory and Practice, Vol. 30 (2010) No.24, p. 27-29. (In Chinese)
- [3] C.T. Wang, D.Y. Fang and Y. C. Wang. Investigation and analysis of scientific research status and management measures of university teachers, J. Research and development management, 2011, 23(02):130-133.
- [4] Y.N. Wang. Review of scientific research on vocational education in 2013 and 2017 (review of viewpoints), J. China vocational and technical education, 2018(07):15-30.
- [5] Y.N. Wang. Review of scientific research on vocational education in 2013 and 2017 (data perspective), J. China vocational and technical education, 2018(04):14-29.