

The Practical Difficulties and Countermeasures of Scientific Research Management in Higher Vocational Colleges from the Perspective of Refined Concept

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Abstract: with the Increasing Number of Scientific Research Projects Undertaken by Higher Vocational Colleges and the Multi-Channel Sources, the Previous Extensive Management Mode Can Not Fully Adapt to the Current Scientific Research Management. How to Realize the Scientific Management Upgrading and How to Make the Management Mode of Higher Vocational Colleges Quickly Transition to the Refined Management Has Become an Urgent Problem for the Managers of Scientific Research Work. Based on the Previous Research Data and Interviews, This Paper Analyzes the Existing Problems of Scientific Research Project Management in Higher Vocational Colleges, and Puts Forward Feasible Countermeasures for the Existing Problems Combined with the Refined Management of Scientific Research Projects in Higher Vocational Colleges.

1. Introduction

In recent years, the state has paid more attention to scientific research. The number of scientific research projects implemented by colleges and universities is increasing year by year, and the amount of funds is also increasing. With the increase of the number and sources of scientific research projects, the past broad management mode can not fully adapt to the current scientific research management. How to carry out scientific management upgrading and how to change the management mode of colleges and universities quickly has become a practical problem faced by scientific research managers. Mature operation is first applicable to enterprise operation[1]. After its successful application, it is gradually applied in hospitals, scientific research institutions and other fields. After the 20th century, it has been proved to be a scientific and highly operational concept. The scientific research project of special school is for the management of mature and applicable scientific management mode, is for the enthusiasm of scientific research teachers, scientific research can not fully mobilize the improvement of management service quality, and the standardization of scientific research project management can effectively promote.

2. The Problems and Difficulties Faced by Scientific Research in Colleges and Universities At Present, China's Colleges and Universities Are Ushering in an Era of Development

Scientific research plays an increasingly important role in the development of colleges and universities. The college recognizes the importance of scientific research. Especially in the current historical background of "mass entrepreneurship and innovation", the society needs more and more innovative talents, and scientific research activities are indispensable. In Colleges and universities, teachers' participation in scientific research activities is not only an effective way to improve their

professional quality, but also an inevitable choice to improve the ability of personnel training[2]. However, Shi weiiping and Tang - Linwei revealed that from 2010 to 2014, the quantitative survey of the main scientific research results of the empirical backbone colleges and universities in 200 countries in China showed that the overall level of scientific research in China's colleges and universities was relatively low. The number of topics at 68% level in higher vocational colleges is close to “zero”. Many problems like the uniqueness of opaque scientific research, the dragging of scientific research institutions, scientific research papers, lack of funds for scientific research, and the lack of systems in higher specialized schools are significant (China Education News, July 9, 2015)[3]. Therefore, colleges and universities should conform to the historical trend, take active measures, strengthen scientific research, and lay a solid foundation for the social training of high-level innovative talents. For a long time, as the object of traditional thought, the conflict between vocational college education and scientific research is still continuing. The whole breach of faith in scientific research has become a bottleneck restricting the high-quality and sustainable development of colleges and universities.

Table 1 Statistics of the Number of Respondents Who Do Not Know Their Identity in This Book

	Frequency	Percentage	Effective percentage	Cumulative percentage
School leader	4	1.1	1.1	1.1
Administrative personnel	107	29.6	29.6	30.7
Teacher	68	18.8	18.8	49.4
Student	184	50.6	50.6	100.0
Total	361	100	100.0	

2.1 Research Team and Research Time Investment

The main performance is: lack of stable research team[4]. Compared with ordinary colleges and universities, most higher vocational colleges lack of reasonable and long-term scientific research planning, clear main research direction, scientific research team members composition, characteristics, role arrangement and task division, etc. also lack of systematic planning; lack of appropriate scientific research assistants. For colleges and universities, the high-quality postgraduate team is the main force of scientific research, it is obvious that the quality of scientific research of vocational college students is generally lacking, and the necessary scientific research time is lacking. Compared with the ordinary college teachers, higher vocational college teachers have heavy teaching tasks and complicated work, so they can not devote a lot of energy to scientific research activities.

2.2 Research Funding

First, the overall investment in scientific research is insufficient. At present, some higher vocational colleges also attach great importance to scientific research work, but in addition to the regular application of government projects at all levels every year, generally only the symbolic small amount of funding within the school is difficult to complete in-depth scientific research projects; secondly, there is no long-term scientific research investment plan. As we all know, scientific research needs long-term investment and attention to obtain returns, but long-term investment is risky, so general units are not willing to invest in scientific research for a long time [5].

2.3 Accumulation of Scientific Research

Scientific research achievements are a long-term process of accumulation, but the scientific research work in domestic higher vocational colleges generally starts late, with little accumulation and low quality[6]. The key laboratories and Engineering (Technology) centers relied on by high-level scientific research activities are rare, and it is difficult to successfully apply for high-level scientific research projects. “Fragmentation” of scientific research projects is also an important reason for less accumulation and low quality of scientific research results. On the one hand, due to the lack of a stable scientific research team in higher vocational colleges, it is difficult to “focus” scientific research direction, which seems to be large in quantity and wide in scope, and in fact, the

quality of research results is not high; on the other hand, the follow-up development of scientific research projects is missing, the research is not sustainable, and the results are superficial. Under the current scientific research management system, if there is no follow-up funding, the conclusion of the project means the end of the project, and no one pays attention to the deep excavation of research results[7]. Several years ago, several teachers of our unit successfully applied for the cold season aquatic iris introduction research project, and selected several excellent and new varieties of aquatic iris. However, after the project ended, because there was no follow-up funding, it was unable to continue in-depth research and development, and many years of painstaking efforts were paid to the East. For researchers, project interruption means “starting from scratch”[8]. Similar cases in the industry are probably common.

2.4 Scientific Research Management

At present, the scientific research management in higher vocational colleges is generally lagging behind. The current management system mainly follows the practice of ordinary colleges and universities, without considering the characteristics of higher vocational colleges. The main performance is: lack of scientific research oriented teacher management system. At present, the majority of higher vocational colleges require teachers to be rewarded or not punished for their scientific research, and teachers are not willing to participate in scientific research actively; they are not aware of scientific research service[9]. At present, most higher vocational colleges fail to effectively integrate all kinds of scientific research resources according to their own characteristics, and it is common for researchers to fight independently. In addition, in view of the small volume of scientific research in higher vocational colleges, there is a general lack of internal research service guarantee institutions, a large number of research materials preparation, cumbersome financial reimbursement process and other research chores make researchers bored; the assessment method is inappropriate. At present, higher vocational colleges still mainly follow the scientific research assessment methods of ordinary universities, attach importance to high-level papers and other forms of scientific research achievements, and ignore the practical application and technology transfer of scientific research achievements.

3. Countermeasures for the Fine Management of Scientific Research Projects in Higher Vocational Colleges

3.1 Correctly Positioning the Scientific Research Direction of Higher Vocational Colleges

Higher vocational colleges are different from undergraduate colleges. On the basis of professional research, the research characteristic of higher vocational colleges is the research of practical technology. The scientific research advantage of higher vocational colleges lies in solving technical problems in production practice for enterprises, industries and local governments. The teaching and scientific research of higher vocational education workers should be combined with the actual situation of enterprises and industries. From the practical work to find topics, in the application of research and transformation of results, writing short and innovative scientific research articles is more meaningful for higher vocational research.

3.2 Formulate the Standard of Fine Management of Scientific Research Projects

Based on the scientific research management platform, strengthen the process management of scientific research projects, refine the standards, simplify the process, optimize the scientific research management workflow, and avoid the extensive management completely relying on manpower. By focusing on the application, mid-term inspection, conclusion, expense reimbursement and other links in the management of scientific research projects, and formulating specific management measures for vertical and horizontal scientific research projects, the management of various scientific research projects will be standardized, scientific and reasonable, and the work efficiency of scientific research managers will be effectively improved.

Table 2 Specific Forms of Financial Support for Enterprises Obtained by Colleges and Universities

	Frequency	Percentage	Effective percentage	Cumulative percentage
Grants	66	18.2	18.2	18.2
Introduction of advanced equipment	104	28.7	28.7	47.0
Free teacher training	79	21.8	21.6	68.8
Co construction of training room	113	31.2	31.2	100
Total	362	100	100	

3.3 Construction of Scientific Research Team

Scientific research is inseparable from teamwork. Personal knowledge structure and cognitive level are limited, and a joint team with reasonable discipline, age and professional title structure, complementary advantages and cooperative basis is established to tackle key scientific research issues, which can play a good role in the scientific research process. Higher vocational colleges can also set up scientific research innovation team or social service team according to the school running characteristics of colleges, so as to better realize the transformation of scientific research achievements.

3.4 Improve the Rules and Regulations

According to the particularity of their own projects, higher vocational colleges should coordinate with relevant functional departments to formulate or improve scientific research management methods, such as vertical / horizontal project funds management methods, detailed rules for the implementation of scientific research achievements awards, academic norms and measures for handling academic misconduct, etc., and ensure that the new scientific research management system is in line with the actual and financial characteristics of the school's scientific research work, and can change according to the policies of higher authorities Update the system timely. After the system is improved, it is necessary for the scientific research management department to carry out various management systems or policy interpretation and business training, so that the scientific research personnel can understand the scientific research system and avoid detours in the implementation of scientific research.

3.5 Construction of Scientific Research Management Platform

By using the Internet technology, the scientific research management platform of higher vocational colleges is constructed, and an efficient scientific research database is established. Speeding up the informatization construction of scientific research project management in higher vocational colleges can effectively improve the efficiency of scientific research management. Scientific research management platform can realize many functions such as project application, mid-term inspection, achievement statistics, etc. The establishment of scientific research management platform can realize the real-time update of data. Taking the vertical project management as an example, information can be entered into the platform at all stages from project application to project conclusion, so that the management personnel can know the progress of project implementation at any time, and then the year-end scientific research statistics can be completed by one click of the management platform.

4. Conclusion

The key to improve the quality of education and social services. The change of educational thought leads to the change of educational mode and teaching mode in higher vocational colleges. To promote teaching by research is an important sign of the difference between scientific research in Higher Vocational Colleges and specialized scientific research institutions, and also a hot topic of the teaching reform in higher vocational education. Fu teaching in scientific research, teaching in scientific research activities, supporting teaching reform with scientific research achievements, realizing the interaction between teaching and scientific research, teaching and scientific research are becoming the strategy to promote the sustainable development of higher vocational colleges.

Under the new historical conditions, the educational function of higher vocational colleges should be shifted from simply emphasizing the teaching function to teaching and educating people, cultivating talents with all-round development of morality, intelligence and physique, strong ability, high quality and innovative spirit. Teaching and scientific research will become the basic functions of higher vocational colleges, and also the two basic dimensions to measure the quality of teachers. Therefore, we should take teaching and scientific research as a whole, neither contradicting nor replacing each other, and jointly build the education environment of higher vocational colleges. Secondly, the interaction between teaching and scientific research is the main theme of the development of higher vocational colleges. The traditional vocational education thought takes teaching as the center, while the modern vocational education thought emphasizes the overall cultivation of human's comprehensive quality, so that the educated's knowledge, ability and quality can be fully developed. Carrying out scientific research is to provide an environment for teaching to cultivate innovative talents. Especially in today's world, with the rapid development of science and technology, the renewal of knowledge brings great pressure to higher vocational education.

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