Research on Innovation of Construction Mode of Scientific Research Innovation Team in Higher Vocational Colleges Based on Human Capital Theory

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Abstract: The scientific research and innovation team in higher vocational colleges is an important organizational carrier to improve technological productivity and innovate technology, and it is also a concrete manifestation of scientific research culture in higher vocational colleges. It is of great practical significance to the development of higher vocational colleges. The construction of scientific research and innovation team in higher vocational colleges meets the objective requirements of the development of higher vocational education. The construction of scientific research innovation team is the key to improve the scientific research strength and social service ability of Higher Vocational colleges. In view of the fact that the overall strength of scientific research in higher vocational colleges is relatively weak and insufficient, this paper analyses the enormous difficulties and challenges faced by the establishment, cultivation and management of scientific research innovation teams in Higher Vocational colleges, and puts forward the path selection for the construction of scientific research innovation teams based on the characteristics of higher vocational colleges.

1. Introduction

Revitalizing the country by science and education and strengthening the country by talents are the fundamental plans for realizing economic revitalization and socialist modernization in China. For a long time, science and technology have been the key support areas of the state finance. Its importance is not limited to its theory itself, but more importantly, it brings managers into a systematic, comprehensive, process-based thinking perspective to look at the organization and management behavior around us, to help us scientifically predict the development direction and crisis of the organization and formulate corresponding countermeasures [1]. Use people as tools to use, instead of seeing it as a human capital to develop and utilize, not recognizing the difference between human capital and material capital, attaching importance to the action of human capital, putting people first and providing a good organization for the all-round development of people. Environment [2]. Stimulating scientific research and innovation capabilities and promoting scientific research development are the primary tasks of higher vocational education. Throughout the research literature on scientific research and innovation teams, from the perspective of human capital theory, the research on the research team of higher vocational research, especially the research on the construction of higher vocational research and innovation team is almost no [3]. Higher vocational colleges can only gain vitality and gain social support if they continuously improve their social service capabilities. The research and innovation team is an effective organization form to improve the scientific research level and social service ability of the school.

2. Theoretical Connotation and Organizational Structure of Scientific Research Innovation Team in Higher Vocational Colleges

2.1 Theoretical connotation of scientific research and innovation team

The scientific research and innovation team in higher vocational colleges is a group engaged in scientific research composed of personnel with a common vision, complementary skills and mutual cooperation around common scientific research goals. Based on the concept of human capital, we

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regard the human capital of higher vocational colleges as the comprehensive value stock of knowledge, technology and innovative concepts that all teachers of higher vocational colleges put into higher vocational colleges and can bring benefits to higher vocational colleges now or in the future [4]. Different from the research and innovation teams of other research organizations, the research and innovation team of higher vocational education undertakes multiple responsibilities of academic research, scientific and technological services, transformation of results and service places, and is more practical. Members are mostly teachers, students, employees or related. Composition of personnel. A team is a collection of small people who can complement each other and contribute to a unified goal and standard with shared responsibility [5]. The research and innovation team has a reasonable organizational division, clear goals, tasks and moderate work pressure. And constantly exchange energy with the organization's external environment, it will also experience the cycle evolution of germination, development, maturity and decline, there is a certain regularity and predicTable development form, which can form a predictive organizational growth model.

2.2 The organizational structure of scientific research and innovation teams in higher vocational colleges

Leading figures as leaders in research and innovation teams in higher vocational colleges have a global impact on the development of disciplines, can motivate and aggregate team strengths, and are responsible for team planning, organization, command, coordination and control, achieving multidisciplinary and multi-disciplinary Professional cross-cutting, complementary and integrated development [6]. Human resources are often linked to management and development. On this basis, human capital pays attention to the investigation of its capital form, emphasizing the relationship between human internal quality and production capacity and its income capacity. Therefore, it is often linked to investment and income. The research and innovation team is a rigorous and organic whole through research activities, research and development of scientific research results, and thus serving local economic development and upgrading its own scientific research level [7]. Scientific research innovation team in Higher Vocational Colleges refers to teachers with high educational background or professional titles. According to their own research direction, they are willing to form a flat team with knowledge and skills complementary to each other for a certain task and goal. At present, most of the research and innovation teams in higher vocational colleges come into being because of some national or local technology projects, although this is also the need for higher vocational colleges to participate in the combination of social science and technology innovation and social development. With professional leaders as the core, R&D centers, engineering technology centers, key laboratories and other research institutions as the carrier. The basic connotation of teachers' scientific research and innovation team in higher vocational colleges is high level of knowledge, complementary skills, mutual trust and effective communication. Its inherent characteristics include “subject system” of organizing mode, high ambiguity of objectives, high dynamic of members and high management means.

3. Difficulties in the Construction of Scientific Research Innovation Teams in Higher Vocational Colleges

3.1 The vague orientation of scientific research in higher vocational colleges has affected the formulation and Realization of objectives

Positioning is the most fundamental problem in the development of scientific research ability in Higher Vocational colleges. In recent years, facing fierce competition, higher vocational colleges urgently need to strengthen the connotation construction. In the process of serving regional economic construction by means of scientific and technological innovation and service, the urgent problem to be solved in higher vocational colleges is to set up scientific and technological innovation team [8]. But the research object of scientific research and innovation team is technology science. Science has special rules. Some scientific research is short for several years and

long for hundreds of years. It is not stipulated by artificial project deadline. The number of team members is an important factor affecting team performance. Each member has his or her research background. A certain number of scientific research members have formed a certain scale of discipline background, and discipline background has become an important feature to distinguish different teams [9]. This type of human capital is the human capital with the largest proportion, the highest stock of human capital and the greatest value creation in higher vocational colleges. It is the foundation and motivation for the existence and development of schools. The research direction is not clear enough, and the scientific research characteristics need to be refined and improved. All these have a great impact on the formulation and realization of the goals of scientific research and innovation team construction, resulting in the lag of scientific research and innovation team construction. Scientific research and innovation teams are also organized according to departments and disciplines. Due to the lack of diversified knowledge background and scientific research experience, the research direction of such scientific research and innovation teams is relatively single and the research scope is relatively narrow.

3.2 The lack of regulation of scientific research activities restricts the innovation and potential of scientific research and innovation teams

The current personnel management and scientific research management focus on quantitative assessment. In the traditional scientific research evaluation system, the only yardstick to measure teachers' scientific research ability, scientific research level and scientific research achievements is scientific research achievements mainly marked by the number of papers published in periodicals. In the long run, if higher vocational colleges want to make great progress, they must actively strive to play an important role in the regional economic construction. Through the construction of scientific research and innovation teams, they can improve their scientific research strength and their ability to serve the outside world, so as to establish the college's position in society [10]. He did not put a systematic technical discipline in his strategic vision, regarded the end of scientific research projects as the end of technical research, and did not establish a long-term and developing scientific research organization mechanism in the scientific research and innovation team. Any scientific research and innovation team is constrained by time and space, and changes dynamically with the change of time and space. Because many teams are purposeful and utilitarian when they are established, many team members are not clear about the purpose of the team. After the project declaration, team members are only responsible for their own parts, and the team lacks cohesion. The evaluation and reward mechanism of scientific research workload is limited to the first person in charge or the first author. To some extent, this talent evaluation and management mechanism causes the loose isolation of scientific researchers. The reason is that the person in charge of the project does not pay enough attention to the human capital characteristics of the participants and lacks coordination.

3.3 Obstacles to the integration of scientific research culture

This kind of obstacle to the integration of scientific research culture refers to the obstacle to the integration of other scientific research cultures caused by the overlap of the same scientific research culture. As an effective organizational form for scientific research and technological development, scientific research and innovation team can concentrate the limited human, material and financial resources within the college, strengthen the cross-integration of various specialties, effectively improve the level of scientific research and the quality of scientific research achievements, and enhance the ability of scientific and technological services. In addition, the assessment indicators of the level of scientific research projects and the amount of funds received are used as the measurement means to realize rewards and punishments, which lay emphasis on quantitative evaluation, making the evaluation lack of scientific nature, focusing on results evaluation, ignoring process evaluation, and making the evaluation lack of timeliness. On the one hand, similar or identical academic background makes it easy for these scientific research members to merge into a team, but the more they develop, the more they form an inherent scientific research culture, a relatively mature technological research foundation and a relatively fixed technological research

routine. The emphasis on basic theories and the neglect of practical application make the research content difficult to compete with research-oriented universities, thus causing higher vocational colleges to deviate from their research development direction and further deviate from the leading direction of talent cultivation. The labor of human capital in higher vocational colleges is different from that of other workers. It takes long-term hard work to produce and train talents, and the results often take five, ten or even more years to show up. The research direction is not easily changed and the innovation vitality is seriously insufficient, which to a certain extent reduces the scientific research and innovation vitality of the scientific research and innovation team in higher vocational colleges.

4. Exploration on the Construction Path of Scientific Research Innovation Team in Higher Vocational Colleges

4.1 Establishment of scientific research and innovation team

Talents are the most important factor in the construction of scientific research and innovation team. Constructing a reasonable distribution echelon of talents is an important factor in building a high-performance scientific research and innovation team. The capacity building of social service is not only a long-term important task, but also an important social responsibility for each higher vocational college. Under the leadership of technical experts, each scientific researcher is passively absorbed into a technical group to undertake some part of the research or basic research of a scientific research project. As an excellent team leader, we should not only have deep academic attainment and forward-looking strategic vision, but also have excellent management, coordination ability and good collaboration spirit. As an important component of the scientific research ecosystem, the scientific research and innovation team has occupied a certain niche in the higher education system through continuous scientific research activities, formed its own structure and function, and played a role in scientific research and innovation. The biggest difference between human capital and material capital is that it has a strong “activeness”, that is, “incentive.” People always achieve the increase and improvement of their own capital stock in the process of constantly pursuing self-improvement and the realization of their own values. It not only injects fresh blood into the development of scientific research and innovation team, but also overcomes many shortcomings of the traditional “tutor system” graduate training model, which helps to cultivate and improve the innovation ability of graduate students.

Through the selection of some strong scientific research backbones in the hospital, we will focus on fostering, cultivating and nurturing professional leaders. Provide specific direct technological innovation, consulting, promotion and service for regional economic and social development or industry industries, and assume the functions of technical service centers; according to their own hobbies and technological frontiers, some technical elites actively combine themselves. Aiming at a technology peak to form a research and innovation team. Encourage joint research projects with key higher vocational colleges, participate in research and development centers jointly established by regional economic pillar industries, emerging industries and key enterprises, and carry out research and development, technological innovation and innovative research. Collaboration with other advantageous teams, making use of their strength to become bigger and stronger, integration of industry and education with different enterprises, cooperation between schools and enterprises, etc., are all beneficial choices for scientifically and reasonably setting their own niche. Because of its higher level of knowledge, human capital in higher vocational colleges has obvious characteristics in its level of psychological needs. That is, high-level spiritual needs occupy a dominant position. It pays more attention to spiritual satisfaction than ordinary human capital. This satisfaction can make it produce tremendous, lasting and sTable enterprising spirit. According to the previous research strategy, on the one hand, to complete the task of scientific research projects, on the other hand, to actively understand the technological frontier, emancipate the mind, and dare to innovate.

4.2 Operation mechanism of scientific research innovation team

Team culture refers to a kind of consciousness culture formed by team members in the process of mutual cooperation in order to realize their respective life values and achieve the common goals of the team. It is an important guarantee to enhance team cohesion and competitiveness. To realize the social service function of Higher Vocational colleges, we need to rely on the basic conditions of the school's own concept innovation, connotation improvement and resource integration to enhance its strength in order to obtain the support of industry enterprises. For example, the introduction of technical experts with different academic perspectives, the integration of resources from multiple disciplines, the formation of new disciplines and the re-selection of new scientific research projects, etc., will encourage researchers to join the scientific research team under the multi-disciplinary academic background. Research shows that group differences are positively related to creativity. When dealing with complex and unconventional problems, groups with differences composed of individuals with different skills, knowledge, abilities and viewpoints will be more efficient. The key to team culture construction is to cultivate innovative team cohesion. Team cohesion enables team members to have a strong sense of belonging, honor and responsibility to the team. While benefiting their own development, they also provide valuable human and material resources for enterprises, expand mutually beneficial and win-win development space and enhance their core competitiveness.

The common goal is to link team members and team interests. Only on the basis of common goals can team members form strong centripetal force and cohesion. The quality of teachers directly determines the quality of their social services. Only by continuously improving the quality and service level of the teaching staff can we better provide services for the needs of all kinds of professional knowledge and skills. Active adjustment of research direction to achieve breakthroughs in their own development and reorganization in the direction of scientific research projects can not only avoid long-term control of organizations by technical authorities in a certain field, but also help scientific research organizations to improve their scientific research structure. Research and innovation team members should also pay attention to the distribution of different functional roles. There are differences and complementarities in professional background, knowledge structure, ability structure, and research interest. It can broaden the team's research ideas, stimulate team creative inspiration, and enrich the team. Research content. Therefore, the construction of the research and innovation team in higher vocational colleges can be set as follows: To carry out research on the practicality, forward-looking research and application of scientific research that can produce significant economic or social benefits in the region, which is of great significance to local science and technology, economic and social progress.

5. Conclusion

The healthy development of an efficient innovation team depends on an effective operating system and mechanism. On the basis of doing a good job in research, the scientific research and innovation team has increased its investment in resources, broadened the channels of information dissemination, strengthened the promotion and training of talents, strengthened the research on professional characteristics, and continuously expanded its academic influence and gradually expanded its expertise. Cultivate the team spirit of cooperative learning, encourage team members to be innovative and carry forward the indomiTable spirit of academic research. Give full cooperation in scientific research funds, scientific research resources, scientific research conditions, scientific research time, etc. Actively help to solve the difficulties encountered in scientific research; vigorously promote young and middle-aged experts in the early stage, and continue to absorb the management experience and outstanding components of the scientific research team into the “new” scientific research and innovation team. To enable scientific research and innovation teams to carry out research activities independently according to team objectives, and to keep the team vigorous. It is the goal of higher vocational colleges to have an innovative team with ability, vitality and creativity.

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