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Research on Strategies for Improving Scientific Research Performance of Business Schools in Universities from the Perspective of Knowledge Management

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Abstract: *The scientific research achievements of secondary business colleges of universities are not only an important reference for improving the academic influence of the college itself, but also one of the standards for the assessment of secondary colleges. As a knowledge-intensive organization and teachers as an important carrier of knowledge, it is very reasonable and feasible for universities to conduct strategic research on the performance improvement of scientific research management through the perspective of knowledge management. This paper uses the theory of knowledge management model to analyze the problems of socialization obstacles, insufficient external effect, poor combination process, and lack of implicit ability in the scientific research management of business colleges, and makes its spiral evolution to empower the scientific research management of business colleges and improve the sustainable development ability of business colleges by forming academic research teams, building industry-university-research integration platforms, establishing knowledge management practice communities, and improving teachers' knowledge management capabilities.*

Keywords: *Knowledge management; Business school; Scientific research management*

1. Introduction

The business schools of Chinese universities not only cultivate high-quality business professionals, but also have the responsibility of scientific research and serving the society. In the face of the dynamic and complex economic development environment, effective scientific research and social service work is the only way for the good development of business schools. Therefore, whether it is to complete the assessment of the academic scientific research achievements of secondary business colleges, or to expand and enhance the academic influence of business colleges, how to sustainably improve their own scientific research performance is an important issue faced by business schools, and scientific planning and research practice are required.

Colleges and universities are an important foundation and platform for the development of science and technology[1], as well as knowledge-intensive organizations, teachers are important carriers of knowledge, and the effective management of knowledge by business schools will inevitably effectively improve the output of relevant knowledge. Scientific research performance is the result of professional knowledge output, so reviewing and putting forward relevant policy recommendations from the perspective of knowledge management is the natural direction to improve the scientific research performance of university business schools.

2. Research Review and Progress

2.1. Knowledge Management Related Research

Knowledge management is a dynamic process of knowledge acquisition, storage, transmission and innovation, in which individuals in the organization continue to transform their explicit and tacit knowledge into organizational knowledge to increase organizational intellectual capital and continuously

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improve organizational competitiveness.[2].In a broad sense, knowledge management is a general term for management ideas and management methods in the context of knowledge economy; In a narrow sense, knowledge management is the process of effectively acquiring, sharing, developing, and applying knowledge, i.e. a set of procedures, infrastructure, technologies, and management tools designed to create, share, and utilize information and knowledge in and around an organization.[3] Wei Qifeng[4] et al. (2021) searched and analyzed the Web of Science (WOS) and CSSCI databases respectively, and from 2000 to 2019, the English literature mainly focused on knowledge management performance, innovation and system, etc., paying more attention to the comprehensive and innovative application of knowledge management; Chinese literature focuses on the connotation of knowledge management, systems and libraries, tacit knowledge, etc., and is more theoretical discussion.

Based on the knowledge attributes and the difficulty of acquisition, knowledge is divided into two types of knowledge: tacit knowledge and explicit knowledge. Explicit knowledge is embodied in the organization's prescribed charter, technical notes, official documents and other knowledge that is easy to code and communicate; Tacit knowledge is those rooted in personal experience, ability, implicit knowledge within the individual is difficult to imitate, so tacit knowledge is not easy to imitate and steal, is the internal foundation of organizational innovation ability, the key to maintain core competitiveness. From the perspective of previous research, tacit knowledge and explicit knowledge have significant differences in management concepts and means due to their different knowledge nature, and are in a relatively static mode. However, Ikujiro Nonaka and Takeuchi Hirokaka[5] (1995) proposed the famous SECI knowledge management model, including socialization, externalization, composition, and internalization, which expresses the four transformation processes of implicit and explicit knowledge within organizations. Introducing tacit knowledge management from static to dynamic greatly increases the effectiveness of tacit knowledge sharing. In the process of knowledge sharing, it is necessary to transform the subjectivity of the individual into the objectivity of the group, and from the implicit to the explicit, which is a social and collaborative dynamic process.

Sun Yusheng[6] et al. (2022) analyze the development of knowledge management-based learning organization research in China, with practical applications focusing on universities, enterprises, governments, and libraries. In terms of exploring the impact of knowledge management on the team building and development of college teachers, Sun Junhui and Wu Xueping[7] (2021) explore the construction of structured teacher teaching innovation teams in colleges and universities from the perspective of knowledge management, and build the operation of structured teacher teaching innovation teams from the perspective of knowledge management, and improve the level of team building from the analysis of mechanisms such as reconstruction team formation, knowledge collection and production, storage and application, evaluation and guarantee. Wang Jian and Zhu Ningbo[8] (2021) take knowledge management as the perspective to improve the subject teaching ability of young teachers from the aspects of broadening knowledge acquisition channels, strengthening the application of knowledge, building a teacher learning organization, and integrating knowledge. Chen Yunqi[9] (2022) et al. discuss the evolution and interrelationship of knowledge activities in corporate universities, especially the pivotal role of network activities in the transfer of knowledge of business operations and scientific and technological activities.

Knowledge management has been extensively researched at the university level, and in-depth research has been carried out on teacher ability development, teaching level improvement, intellectual property management, etc., but the application of knowledge management in scientific research management is still rare.

2.2. Research on scientific research management in colleges and universities

For university research management research, most of them are based on practical difficulties and sorting out scientific research management system optimization and other aspects of suggestions. Liu Kun[10] (2021) analyzes the dilemma of scientific research management in colleges and universities from the context of "economic man", and proposes to adjust and supplement the hypothesis of "social man", and the contradiction problem of policy and system regulation at this stage is explained by taking "social man" as the assumption of human nature. Li Shiyong[11] (2022) analyzes the triple value factors of innovation, efficiency and orderliness of scientific research management from the perspective of structure and function, analyzes the problem of "value de-embedding" in the scientific research management system according to the competitive action logic between each value element, and puts forward suggestions such as rationalizing the structural relationship of multiple actors, organically linking different value elements, and carrying out collaborative and parallel system adjustment to activate the vitality of scientific research and innovation. Yiming Li[12] (2022) proposed to build a four-layer

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B/W/D/C (Browser/Web/Database/Client) innovative information system based on big data technology to improve the university research management system, and proposed the application of new algorithms to effectively process massive data.

Scientific research performance is a powerful embodiment of scientific research management achievements, and the rational scientific research performance system will also effectively guide teachers' scientific research behavior. In terms of improving the scientific research performance of university organizations, Zhang Ben[13] et al. (2022) proposed that the impact of school-enterprise cooperation atmosphere at the organizational level of universities on the scientific research performance of researchers is inverted U-shaped, and there is a cross-level mediating role between technical ability in the school-enterprise cooperation atmosphere and the scientific research performance of researchers. Zhang Erbi and Shi Wanbing[14] (2022) proposed that based on the needs of local economic and social development, the university's own school-running positioning and the mission of the humanities, local universities should optimize the scientific research performance evaluation system in terms of restructuring the subject, integrating the object, clarifying the purpose, determining standards, improving the system, and improving the method. Wang Bowl[15] et al. (2022) used the Delphi method to reconstruct the evaluation index system based on the balanced scorecard theory on the lack of informatization and internationalization in the scientific research performance evaluation system of universities.

At present, the analysis and research of the scientific research management of universities not only conducts in-depth research from a specific cooperation level, but also uses scientific methods to improve the scientific research performance of universities from the optimization of the overall structure of the system. However, from the perspective of knowledge management, there is a lack of relevant detailed research on the improvement of scientific research management performance of specific business colleges, so as to put forward specific guidance and theoretical reference for the scientific research management work of related colleges.

3. Analysis of the realistic problems of scientific research management in business schools

After China entered a new era, the development of colleges and universities is getting faster and faster, but objectively there is still a lot of room for reform and innovation in the management of scientific research in universities, and it has not reached the level of keeping pace with the times. The SECI Model proposed by Ikujiro Nonaka and Hiroka Takeuchi is an innovative entry point for analyzing the realities of research management in business schools. The SECI model describes the spiraling process of transformation between tacit knowledge and explicit knowledge, including socialization, explicitization, combination and implicitization, and expresses the four transformation processes of implicit and explicit knowledge within the organization. Introducing tacit knowledge management from static to dynamic greatly increases the effectiveness of tacit knowledge sharing. In the process of knowledge sharing, it is necessary to transform the subjective knowledge of individuals into the basis of objective innovation of organizations and teams, from implicit to explicit, which is a social and collaborative dynamic process of knowledge management.

3.1. Tacit knowledge socialization barriers

Tacit knowledge socialization is the process by which individuals pass on their tacit knowledge to others, sharing and creating new tacit knowledge at the same time. On the one hand, the development of humanities and social science research has become more and more detailed, and the professionalism of teachers in business schools in their respective research fields has become more and more prominent. On the other hand, some teachers have certain difficulties in how to carry out scientific research more efficiently in addition to teaching tasks, including the application skills of scientific research topics, thesis submission, project process management, interpretation of scientific research management documents, and diversified cognition of scientific research results. The above two reasons have caused the difference between the scientific research of some business school teachers working alone and slowly, while the scientific research achievements of some experienced and academically accomplished teachers continue to produce. From the perspective of knowledge management, an important reason for this phenomenon is that these experienced and academically accomplished teachers do not share their tacit knowledge related to personal research well with other teachers, resulting in tacit knowledge sharing, that is, socialization barriers.

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3.2. Insufficient externalization

The explicit stage is the process of transformation of tacit knowledge into explicit knowledge, and it is also the process in which tacit knowledge plays a practical role. The theoretical relevance of tacit knowledge explicit knowledge for teachers in business schools is mainly presented in the application of tacit knowledge to scientific research and practice after teachers obtain socialized tacit knowledge, including project declaration, paper publication, student guidance and professional practice, so as to effectively express and convert tacit knowledge into explicit knowledge. At present, the teachers of the College of Business Studies show the phenomenon that a small number of active teachers support the scientific research achievements of the college, on the one hand, the enthusiasm in the project declaration cannot be fully mobilized, resulting in insufficient high-level scientific research projects; On the other hand, due to the insufficient participation of teachers in think tank management and enterprise services, they cannot express their tacit knowledge more clearly through participation in social and economic construction activities, which directly leads to the diversity and overall number of scientific research management performance results.

3.3. The process of explicit knowledge combination is not smooth

The combinatory is the process that the explicit knowledge of knowledge subjects and others is expressed through various materialization carriers, and the process of integrating and innovating new explicit knowledge. Faculty members of the School of Business realize the process of explicit knowledge assemblage through cooperation with teachers to apply for scientific research projects, jointly produce scientific research results, and cooperate with enterprise research institutions. A good process of combining explicit knowledge can not only enrich the explicit knowledge mastered by teachers, but also enhance the effect of school-enterprise cooperation and industry-education integration. Due to the limited resources of individual teachers, and the fact that most of the scientific research activities are alone, there are few results of cooperation between teachers of business schools and enterprises and institutions, and individuals cannot fully concretize explicit knowledge into written language symbols for sharing and integration. The superimposed innovation effect brought about by the poor process of the explicit knowledge combination of multiple knowledge subjects is insufficient, so as to improve the scientific research management performance of the college.

3.4. Implicit explicit knowledge has higher requirements on teachers' knowledge management ability

The process of understanding and assimilating the explicit knowledge after combination, so as to internalize the explicit knowledge into new tacit knowledge in the individual cognitive structure, is implicit, which is a process of innovative alienation of knowledge. For the knowledge management in the performance improvement of scientific research management of business colleges, its theoretical relevance is manifested in the fact that teachers fully absorb and sublimate the new explicit knowledge generated by the combination, and become the new tacit knowledge they have mastered. This requires a smooth transformation of the entire knowledge management in the early stage, not only requires a good knowledge sharing culture and knowledge management practice platform and mechanism, but also requires individual teachers to have a good ability to implicitize. Because implicit is not only simply to directly incorporate explicit knowledge into one's own knowledge system, but to innovate and sublimate according to the actual situation. Therefore, implicit requires high knowledge management ability of teachers, and not all teachers can smoothly complete the implicit process, thereby improving their tacit knowledge.

By using the four processes in the SCIE model, namely socialization, explicitization, combination and implicitization, the scientific research process of university business college teachers is sorted out, and the shortcomings of business schools in knowledge management are found. It provides an effective theoretical basis for the selection of strategies and methods to improve the research management performance of university business schools from the perspective of knowledge management.

4. Research management performance improvement strategy analysis

The main purpose of applying knowledge management to the scientific research management of the School of Business Sciences is to improve the effective sharing effect of teachers' knowledge, condense, enhance and create new explicit knowledge and internalize it into new tacit knowledge of individual teachers. Under the analytical lens of knowledge management model, the practice path of improving the

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scientific research management performance of the business college is constructed, and the cultivation of teachers' knowledge management ability is strengthened by forming an academic research team, actively building an organizational academic exchange platform and knowledge society practice channel.

4.1. Interdisciplinary formation of academic research teams

To break through the barriers of tacit knowledge socialization, business schools can establish interdisciplinary academic research teams by setting up discipline academic leaders, shorten the interpersonal relationship between new and old teachers, and build a formal social network of interdisciplinary faculty communication. With the blessing of knowledge management theory, the formation of academic research teams breaks through the barriers of tacit knowledge socialization, which plays a role in promoting the establishment of learning organizations and cultivating knowledge sharing culture in the college [6]. The establishment of the discipline academic leader system not only provides a formal platform for the socialization of tacit knowledge for teachers with rich academic experience and excellent scientific research achievements, maximizes the knowledge value of leaders, but also creates objective basic conditions for young teachers to obtain effective tacit knowledge, which is conducive to the improvement of young teachers' scientific research ability. The improvement of team members' scientific research ability will cause personal reflection and positive reinforcement within the team, and consolidate the trust within the team.

4.2. Development of scientific research results from multiple perspectives

From the perspective of knowledge management theory, the tacit knowledge obtained by business faculty teachers through the socialization process must be effectively externalized into identifiable and considerable data and scientific research results in order to realize the process of explicitization. On the one hand, teachers' scientific research achievements are presented in various forms, not limited to the publication of papers, and other scientific research achievements such as the adoption of think tank results and school-enterprise cooperation are also receiving more and more attention. On the other hand, it is required to establish an effective mechanism for the in-depth integration of industry, academia, government and research, promote the deep integration of business schools and industrial enterprises and governments in the functions of social services, and apply more theoretical knowledge in practice to form explicit results. Some studies have proposed the establishment of a knowledge management practice community as a school-enterprise cooperation practice platform to integrate various elements to promote the explicit and combination of knowledge [16]. In terms of broadening the path of external manifestation, academic research teams can be connected with external resources to build communication channels, such as holding academic lectures, inviting industry experts to guide paper writing and publication and sharing project application experience, establishing and improving the application channels for think tank achievements, and promoting the construction of school-enterprise knowledge practice communities to highlight social benefits.

4.3. Deepen industry-university-research cooperation

The intrinsic requirements for better completion of the process of explicit knowledge combination, on the one hand, to open up the path of knowledge exogenization of teachers in business colleges by building a knowledge practice community, on the other hand, it is also necessary to continuously deepen the depth of industry-university-research cooperation and fully integrate and innovate individual explicit knowledge. Incorporate high-level scientific research teachers of business schools, talents with rich experience and performance in the industry and experts from research institutions into the knowledge management practice community, integrate and share the high-quality resources of each knowledge subject, timely grasp the changes in economic development and industry demand from macro and micro perspectives, and establish a knowledge management practice community that solves practical problems and highlights social benefits and practical achievements. In the knowledge management practice community, explicit knowledge effectively acts among various knowledge subjects from different organizations to form a knowledge chain, and spiral interaction forms a virtuous circle [6]. According to the real economic development and the needs of the industry, promote the teachers of business schools to continuously update the explicit knowledge to solve the actual "real problems", so as to test the effectiveness of knowledge in practice, and continuously spiral to improve the practical ability of teachers' scientific research.

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4.4. Strengthening teachers' knowledge management capabilities

The process of implicit new explicit knowledge of business school teachers is also the process of updating their knowledge system and acquiring knowledge. From the perspective of knowledge management, the improvement of teachers' personal knowledge management ability is an important basic condition for completing the dynamic spiral of individual and organizational knowledge management effects and realizing the improvement of scientific research management performance of business colleges. To strengthen teachers' knowledge management capabilities, on the one hand, teachers' ability to collect, classify, store and retrieve theoretical research and practical problems from academic leaders or backbone elites in academic research teams or knowledge practice communities; On the other hand, the School of Business should combine the school's teacher training programs and plans, rely on the teacher academic or professional development center, and cultivate teachers' knowledge management ability in a targeted manner, and incorporate the improvement of knowledge management ability into the teacher training plan.

5. Conclusions

Starting from the theory of knowledge management, the knowledge management ability improvement system formed by individual teachers, academic research teams, knowledge management practice communities and academic professional development centers of college teachers from the inside to the outside has been continuously expanded, and the knowledge management ability and effect of teachers in business colleges of universities have been continuously improved. Through continuous circulation, the knowledge management cycle of socialization-extrinsization-combination- internalization is completed, which empowers the scientific research management of the School of Business and enhances the sustainable development ability of the School. [17]

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References

[1] Han F.Q., Zhou X. (2021) The Reform and Innovation of Performance Salary Management in Scientific Research Institutes. Administrative Reform, 7, 79-88.
[2] Yi L.F., Zhu J.Q., Xie Z. (2008) Development and Enlightenment of Human resource planning Outsourcing Decision Theory. Business Economics and Management, 1, 38-43.
[3] Intezari A., Taskin N., Pauleen D.J. (2017) Looking beyond knowledge sharing: an integrative approach to knowledge management culture. Journal of Knowledge Management, 21, 492-515.
[4] Wei Q.F., Xu X., Yang L. (2021) Visual Comparative Analysis of Knowledge Management Research in Chinese and Foreign Languages: Current Status, Hot Spots and Evolutionary Trends. Science and Technology Management Research, 41, 132-139.
[5] Nonaka I., Takeuchi H. (1995) Theory of organizational knowledge creation. Organization Science, 5, 14-37.
[6] Sun Y.S., Tu Q.S., Zhai S.Y. (2022) Research progress of learning organization supported by knowledge management in my country. Library Forum, 42, 33-41.
[7] Sun J.H, Wu X.P. (2021) From the perspective of knowledge management, "double-high" school structured teacher teaching innovation team building. China Vocational and Technical Education, 23, 19-24.
[8] Wang J., Zhu N.B. (2021) From the perspective of knowledge management, the perspective and optimization path of the development of subject teaching knowledge of young teachers in colleges and universities. Heilongjiang Higher Education Research, 39, 81-85.

ISSN 2616-5783 Vol.6, Issue 6: 36-42, DOI: 10.25236/AJHSS.2023.060608

[9] Chen Y.Q., Xu Y.S., Zhai Q.G. (2022) Networking of corporate universities in knowledge management: evidence from China. Management Decision, 60, 3147-3164.
[10] Liu K. (2021) The Dilemma and Institutional Transformation of Scientific Research Management in Universities——Thoughts from Two Theoretical Perspectives of Human Nature Hypothesis. Chinese University Science and Technology, 4, 23-27.
[11] Li S.Y. (2022) The "Value De-Embedding" of Scientific Research Management System and Its Correction Path: An Analysis Based on the Perspective of Structure and Function. Chinese Administration, 8, 75-81.
[12] Li Y.M. (2022) Reflections on the Innovation of University Scientific Research Management in the Era of Big Data. Scientific Programming.
[13] Zhang B., Wang H.Q., Wang X.H. (2022) The influence of school-enterprise cooperation atmosphere on the scientific research performance of university researchers: the mediating role of technical ability. Journal of System Management, 31, 954-963.
[14] Zhang R.M., Shi W.B. (2022) Research on the optimization of scientific research performance evaluation system for humanities teachers in local universities. Scientific Management Research, 40, 76-82.
[15] Wang W., Li X.R., Chen X.P. (2022) University Research Performance Evaluation System and Application Research Based on Balanced Scorecard. Science and Technology Management Research, 42, 52-60.
[16] Jia C. (2022) Analysis on the professional development strategy of "dual-teacher" teachers in vocational colleges from the perspective of knowledge management. Vocational and technical education, 43, 49-55.
[17] Raudeliuniene j., Matar I. (2022) Knowledge Management Practice for Sustainable Development in Higher Education Institutions: Women Managers' Perspective. Sustainability, 14, 12311.