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Research on Existing Problems and Countermeasures of Transfer of Scientific and Technological Achievements in Local Universities

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Abstract

Encouraging the transformation of scientific and technological achievements in colleges and universities is a major policy issue of current scientific and technological innovation. Promoting the transformation of scientific and technological achievements is the key for colleges and universities to fulfill their social service functions and achieve convolution development. Based on the analysis of the current problems of transformation of scientific and technological achievements, and puts forward to countermeasures such as the local industry demand as the guidance, improve the pertinence, establish and improve the scientific and technological achievements of scientific and technological achievements transfer center function, strengthen scientific and technological achievements transfer center staff skills training, formulate preferential policies to promote transformation of scientific and technological achievements transfer,and so on. It provide theoretical guidance to promote the transformation of scientific and technological achievements.

Keywords

Transformation of Scientific and Technological Achievements; Universities; Existing Problems; Countermeasures.

1. Introduction

Encouraging the transformation of scientific and technological achievements in colleges and universities is a major policy issue of current scientific and technological innovation.The transformation of scientific and technological achievements under major policies plays a role of connecting national strategies, serving innovation-driven development and fulfilling social responsibilities. It is an important way to implement innovation-driven strategy, implement supply-side reform, meet the innovation needs of industries and industries, and further cultivate new drivers of economic development.

Promoting the transformation of scientific and technological achievements is the key for universities to fulfill their social service functions and achieve connotative development. China's colleges and universities are the gathering place of talents, but the direct social service ability is not good. Revision since 2015 “Law on promoting the transformation of scientific and technological achievements”, unprecedented achievements transformation policy support, policy makers expect the policy easing after colleges and universities should enter the early results of the backlog of the outbreak of transformation period, but the reality is not the case, the enthusiasm of scientific research personnel to carry out the achievements have not been effective promotion, Even at the university level, excitement and inactivity still exist. The transformation scale of scientific and technological achievements represented by patents in

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Chinese universities is small and the conversion rate is low, which obviously lags behind those in the United States and other foreign universities.

To sum up, the overall transformation of scientific and technological achievements in colleges and universities is exciting and inactive. The status quo of the transformation of scientific and technological achievements in colleges and universities is studied and analyzed, the factors hindering the transformation of scientific and technological achievements are condensed, and corresponding solutions are put forward to provide theoretical guidance for promoting the transformation of scientific and technological achievements.

2. Current Situation of Transfer of Scientific and Technological Achievements in Universities

The scientific and technological achievements of colleges and universities are the knowledge products obtained by the teachers or teams in the complex intellectual labor with their intellectual advantages and the scientific research resources of colleges and universities, which have high academic value or economic value. As the main part of higher education system, local application-oriented colleges and universities focus on training high-quality technical talents for local areas with the goal of serving regional economic and social development. Their orientation is basically teaching-oriented or teaching-research oriented. There are many restricting factors in technology transfer and transformation, which are mainly reflected in the following aspects.

2.1. University Research Achievements are out of Step with Local Needs

The orientation of local application-oriented universities is to serve local economic development. It is the mission and way of survival for local universities to connect with local industrial clusters and promote the development of superior industries. However, due to the weak talent team in local colleges and universities, the connection between talent research direction and local industry is ignored in the introduction of talents, resulting in the inconsistency between talent research direction and local industry demand, and the disconnection between scientific research results and local demand. In addition, local colleges and universities have limited funds for running schools, which are almost all invested in teaching, without enough funds to support scientific research and development, resulting in weak scientific research strength of local colleges and universities. The lack of investment makes the scientific research of the local universities focus on the theoretical research with lower cost, and the research results of its output are also out of line with the production and market demand.

2.2. The Functions of Institutions Serving the Transformation of Scientific and Technological Achievements in Universities are not Clear

Under the guidance of science and technology Department and Education Department of Hebei Province, some local colleges and universities have set up technology transfer centers, or transferred the function of scientific and technological achievements to science and technology Department. A new survey on the functions of scientific and technological achievement transformation institutions in some "double first-class" universities in China shows that more than 50% of the institutions have the function of technology transfer and transformation, but the work content and job orientation are not clear. "Double first-class" universities are still so, local universities can be imagined. The transfer and transformation of scientific and technological achievements is a work involving technology research and development, asset management, financial management, law and other aspects of the business, so the school should be able to clarify the functions of scientific and technological achievements transformation

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institutions, establish a sound working system, so that it can provide services in the whole process.

2.3. The Staff of Scientific and Technological Achievements Transfer have Insufficient Professional Ability

It is a common problem that the scientific and technological achievements transfer institutions in local universities have few staff and lack of professional quality. As the transfer of scientific and technological achievements involves technology, contract, finance, law and other aspects of work, the staff need to have the corresponding professional ability, if the process of technology transfer and transformation of improper operation, there is a great legal risk. Obviously, the ability of the personnel separated from the science and technology Department to engage in technology transfer work needs to be improved, and a professional scientific and technological achievement transfer talent team needs to be trained.

2.4. Imperfect Policy Support and Incentive Mechanism

At present, the promotion system of professional title in colleges and universities is still serious. Emphasis is placed on the assessment of papers, patents, projects and other indicators, and there is less assessment of the transfer and transformation of scientific and technological achievements; The lack of policy encouragement and effective incentive policies for technology transfer and transformation in local universities also leads to the reluctance of teachers to devote their energy to technology transfer and transformation.

2.5. Insufficient Investment in Technology Transfer and Transformation

Local universities often have insufficient investment in technology transfer and transformation. The limited funds of local universities can only support teachers to complete the requirements of research projects for papers, patents, theoretical models and other indicators, but cannot provide follow-up funds to support the pilot tests of research achievements. On the other hand, university-enterprise cooperation is an important way to realize the transfer and transformation of scientific research achievements. However, due to high risks, high investment and long return cycle, enterprises rarely invest in these scientific research achievements, making it difficult to continue scientific research achievements.

3. Solutions for the Transformation of Scientific and Technological Achievements in Universities

In view of the above problems, local colleges and universities can take the following measures to continuously improve the transfer and transformation ability of scientific and technological achievements.

3.1. Improve the Pertinence of Scientific and Technological Achievements Guided by Local Industrial Demand

Local colleges and universities should not only train talents to serve local economic development, but also carry out demand-oriented scientific and technological research and development through targeted talent introduction policies and school-enterprise cooperation. Collect the science and technology needs of local industrial clusters, and introduce high-end talents with corresponding professional direction and scientific research direction; The scientific research mode of "school-enterprise cooperation" is beneficial to solve the problem of insufficient funds in the process of technology transformation by introducing enterprise funds.

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3.2. Establish and Improve the Functions of Scientific and Technological Achievements Transfer Centers

Since the transfer of scientific and technological achievements involves many fields such as science and technology, intellectual property, finance, law and so on, the transfer center of scientific and technological achievements should be established in accordance with the actual situation of colleges and universities, which is coordinated by science and technology, intellectual property, assets, finance, legal affairs and other departments. Define the function and orientation of the center, establish and improve the working system and workflow of the technology transfer center in colleges and universities, and solve a series of problems in the process of scientific and technological achievements transfer in a comprehensive and coordinated way.

3.3. Strengthen the Training of the Staff of the Scientific and Technological Achievements Transfer Center

The transfer of scientific and technological achievements is a comprehensive work, and relevant laws and regulations are still being updated. For example, on May 9, 2020, the Ministry of Science and Technology and other nine government departments issued the Implementation Plan for the Pilot Project of Granting Researchers the right to own or long-term use of Their Job-related Scientific and technological Achievements, which made comprehensive arrangements for the pilot project. In the face of the comprehensive business of technology transfer and transformation and the constantly updated policy of transfer and transformation of scientific and technological achievements, it is necessary to strengthen the professional training of technology transfer personnel to make them familiar with the latest policy and enhance their business ability.

3.4. Formulate Preferential Policies to Promote the Transfer and Transformation of Scientific and Technological Achievements

It is the most direct and effective way for colleges and universities to serve local areas and improve their ability to transfer and transform scientific and technological achievements by giving priority to research projects with application value and providing scientific and technological support for local economic development through university-enterprise cooperation. At the same time, colleges and universities should attach importance to the assessment indicators of the transfer and transformation of scientific and technological achievements in the links of performance evaluation and professional title evaluation, put an end to the single talent evaluation method of "emphasizing theory over transformation", and improve a diversified and reasonable talent evaluation system.

4. Conclusion

Based on the analysis of the current problems of transformation of scientific and technological achievements, and puts forward to countermeasures such as the local industry demand as the guidance, improve the pertinence, establish and improve the scientific and technological achievements of scientific and technological achievements transfer center function, strengthen scientific and technological achievements transfer center staff skills training, formulate preferential policies to promote transformation of scientific and technological achievements transfer,and so on. It provide theoretical guidance to promote the transformation of scientific and technological achievements.

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