



Research on Countermeasures and Ideas of Transforming Scientific Research Achievements in Universities Under the Background of Data Intelligence Era

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Abstract. The era of digital intelligence is an era with data at the core and driven by intelligent technology, which not only changes the way information is disseminated, but also reshapes the way we obtain, process and share information. In this context, as an important position for the output of scientific research achievements, the transformation of achievements is an important link to achieve social benefits. At present, there are still many problems in the transformation of scientific research achievements in colleges and universities, and the era of digital intelligence has brought new characteristics of the transformation of university achievements and put forward new requirements for the transformation of achievements. Based on the background of the new era - the era of digital intelligence, the author makes a detailed analysis of the path of transformation and improvement of scientific research achievements in Chinese universities, in order to accelerate the progress of the transformation of scientific research achievements in Chinese universities, so as to achieve more social benefits.

Keywords: digital intelligence era; universities; scientific research achievements; conversion path.

1 Introduction

The transformation of scientific research promoted by universities and research institutes refers to the process of creating scientific research results with practical value through the use of scientific and technological innovation, and transforming them into commercial products that can improve social and economic benefits. In September 2021, The State Council issued the Outline for Building a powerful Country with Intellectual Property Rights, clearly indicating that it is necessary to improve the application mechanism of efficient and smooth operation and full realization of value, which has an important role and significance for the construction of China's intellectual property management system and scientific and technological achievements transformation platform. According to the investigation and research on the transformation of scientific and technological achievements in China in 2020, the scientific research projects of

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China's universities and research institutes increased by about 30% in 2019, and the transformation of scientific and technological achievements, as an important indicator of the assessment of scientific research projects in universities, has also been paid more and more attention by scientific research management units. However, most of the scientific research projects belong to basic research, with insufficient innovation and low conversion efficiency. Some applied research innovation is not strong, failed to fundamentally break through the technical restrictions, and there is still a large gap with the current market application and enterprise demand, the market conversion rate is not high.[1]

2 The Current Status of the Transfer of Scientific and Technological Achievements in Some Universities

2.1 Lack of a Perfect Mechanism for Sharing Scientific and Technological Achievement Resources

There are information barriers in universities, and it is of great importance to interact and communicate with other universities with similar scientific and technological directions, maintain close ties with the government and enterprises, and achieve resource sharing. Currently, the researchers of universities and enterprises operate independently, with most adopting the single-handed mode. They do not pay enough attention to resource sharing and cooperation, which will seriously restrict and reduce the efficiency and speed of scientific and technological achievement transfer, and affect the development of scientific and technological innovation. Due to information asymmetry, there are many problems between universities and cooperative enterprises. In this regard, universities must improve the comprehensive quality of their collaborative innovation technology R&D teams to ensure that they have a complete theoretical knowledge system and enhance the innovation and practicality of scientific and technological achievements [2].

2.2 Lack of Comprehensive Technology Information Platform for Technology Transfer

By 2023, there was no national technology transfer information platform in China, and only a few provinces had independent technology platforms, but they faced problems such as limited dissemination direction, few accepting enterprises, and limited functions. With the rapid development of information technology and digital technology, colleges and universities are facing new opportunities and challenges in technology transfer. Technology transfer, as an important means of testing scientific and technological innovation, plays a crucial role in scientific and technological activities in colleges and universities[3]. In the context of the digital era, the urgent need for a technology service system driven by data analysis, artificial intelligence and other digital technologies requires immediate implementation. How to fully utilize digital technologies,

improve the efficiency and accuracy of technology transfer, and enhance the economic benefits of technology transfer has become increasingly important.

2.3 The System for Distributing Benefits from Technology Transfer is Not Well Established

Most of the scientific and technological achievements of universities are deprived of opportunities to be promoted to society, resulting in idle and wasted achievements. At the same time, the distribution of benefits among universities, enterprises, inventors, and promoters is not clear. There is no fixed standard quantitative evaluation mechanism for technology achievements and the rational allocation of interests among universities and enterprises. In the transfer process, both parties usually evaluate technology achievements and transfer risks from the perspective of maximizing benefits and minimizing risks, which makes the technology transfer process very unsmooth[4]. Meanwhile, universities only pay attention to the ownership of scientific and technological achievements, ignoring the labor value of innovation and technology transfer workers, thus inhibiting the enthusiasm of innovation and technology transfer workers.

2.4 Build a Scientific Evaluation System

The main goal of the basic scientific research business fee implementation is to train young teachers to conduct research exploration, improve the autonomous innovation capacity of universities and cultivate high-level talents. Currently, the number of monographs, papers, patents, awards, etc. is still the key evaluation indicator for project funding. However, due to the uncertainty of exploratory research, using these indicators alone for evaluation seems unreasonable. Therefore, it is particularly necessary and urgent to build a scientific and targeted evaluation system. A scientific evaluation system should not only reflect the short-term performance of the funding, but also promote the long-term goals of talent cultivation and autonomous innovation capacity development.

2.5 Top-down Design is effectively Combined with Free Exploration

When the project is established, it is necessary to support young teachers to carry out free exploration around independent topic selection, and to give full play to the top-level design role of the school's scientific research management department, concentrate the school's superior disciplines and resources, concentrate on major events, tilt towards the direction of key disciplines that need support, and realize the effective integration of superior resources.

3 Paths to Enhance the Efficiency of Science and Technology Achievement Transformation in the Era of Digital Intelligence

3.1 Application of Data Analysis and Prediction

The application of data analysis in the transformation of scientific research results covers many aspects. Colleges and universities can collect all kinds of data on the use of scientific research results, including the basic situation of the results, the transformation intention, the transformation value of the results, etc., and process it through data analysis tools to extract the transformation information. Data analysis can provide data support for universities to develop the transformation of scientific research results[1]. For example, a university analyzed the data of the transformation of scientific research achievements in the past few years through data analysis and information platform, and found that the benefits of the transformation of some achievements showed an upward trend. Based on these analysis results, universities can predict the research and development needs of certain scientific research achievements in the future, so as to arrange the direction of scientific research development in advance. Finally, the application of data analysis makes the transformation of results more accurate and scientific, which can improve the effective use of resources and avoid unnecessary waste.

3.2 Improve the Mechanism for Sharing Scientific and Technological Achievements

The promotion of scientific and technological products in universities is relatively complicated, mainly due to the lack of a rapid and extensive platform for exchange and cooperation of scientific research results between universities and enterprises, and the technical needs of enterprises cannot be quickly transmitted to the university, and the scientific research results of the university cannot be transmitted to the enterprise, resulting in the difficulty of effective use of research results[5]. This year, the "National Patent Navigation Integrated Service Platform" of the Ministry of Science and Technology, which was jointly carried out by the State Intellectual Property Office and other departments to revitalize the inventory of patents in universities and scientific research institutions, has been quite complete. It not only provides information about scientific and technological achievements, but also provides information about technical problems of enterprises, auction of achievements, and online negotiation [6]. Most of this information is the result of high technical content and high transaction value.

3.3 Market Demand-Oriented Patent Increment

The "National Patent Navigation integrated service platform" will timely feedback the evaluation information of enterprises to universities. According to the technical improvement needs and industry-university-research cooperation needs feedback from enterprises, especially the key needs of key core technology research and original

technology with major application prospects, colleges and universities can improve relevant patented technologies, or jointly research with enterprises, carry out order-type research and development and launch innovation, and lay out more high-value patents that meet the needs of the industry[7]. Universities and colleges should firmly establish a patent work orientation for the purpose of transformation and application, comprehensively consider the transformation potential, commercial value and maintenance costs, establish and improve the patent application pre-application evaluation system with the analysis of industrialization prospects as the core, improve the patent quality from the source, and avoid abnormal patent application behaviors.

3.4 Improve the Quality of Scientific and Technological Achievements

As a political institution of higher learning, public security colleges and universities have their special attributes in the transformation of scientific and technological achievements. On the one hand, the innovation of scientific and technological achievements is more oriented to public security combat units, and on the other hand, it has the attribute of confidentiality, resulting in the transformation of scientific and technological achievements in public security colleges and universities is weaker than other universities. Therefore, colleges and universities, including public security colleges and universities, should be market-oriented and oriented to meet actual needs to develop scientific and technological achievements and enhance the practicability of products[7]. It is necessary to comprehensively plan the needs of actual units and society, actively communicate with enterprises, tap out topics with market potential, closely link scientific research work with market demand, and achieve the accuracy match between the transformation of scientific research results and market demand, so as to accelerate the generation and use of scientific research results that society needs urgently. Universities should strengthen research and development of scientific and technological achievements and constantly improve the quality and level of scientific research achievements.

3.5 Create an Atmosphere for the Transformation of Scientific and Technological Achievements

Colleges and universities should pay attention to creating a strong atmosphere for the transformation of scientific research results and promote cooperation with enterprises and governments. When teachers and students conduct scientific research, universities should not only pay attention to the economic and social benefits that scientific research results can create for enterprises, but also pay attention to the social benefits of scientific research results. When carrying out innovation cooperation with enterprises, universities should pay attention to maintaining long-term cooperation with enterprises, not just short-term cooperation. In addition, after universities and enterprises have reached the willingness to cooperate, it is necessary to strengthen the exchange and guidance of scientific research work of enterprises. In order to establish a stable and continuous cooperation, colleges and universities should attach importance to the cooperation with enterprises and the outside world, achieve mutual promotion, resource sharing and mutual learning between the two sides, create a good and dynamic

atmosphere for teachers and students of colleges and universities, and attach importance to the transformation of scientific and technological achievements and the combination of social needs.

4 Conclusion

This paper discusses the application of numerical intelligence technology in the transformation of scientific research results in colleges and universities, and puts forward feasible strategies and ideas. Through the application of information platform and other strategies, universities are provided with more advanced and intelligent management means for the transformation of results. The implementation of these strategies will improve the transformation efficiency and provide a solid guarantee for the smooth development of the transformation of scientific research achievements in universities. With the continuous development of digital intelligence technology, universities will usher in a broader development space in the transformation and promotion of scientific research achievements, injecting new impetus into scientific research innovation and academic progress.

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