Problems and Countermeasures in the Construction of Scientific Research Management Information in Universities

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Abstract. In the information age, the past scientific research management model has gradually shown a backward trend. Strengthening the scientific research management information construction is an inevitable development path, and requires scientific research management to achieve internationalization, modernization, scientific and informationization. The construction of scientific research management information in universities is not only conducive to improving the ability of scientific research management and the decision-making level of leaders, but also enables universities to accelerate the pace of internationalization and to make scientific research results transform faster. This paper expounds the advantages of scientific research management in universities, analyzes some of the problems presented in the process of informationization at the present stage, and on this basis, puts forward countermeasures for the improvement of scientific research management in universities.

Introduction

The development of scientific research management information is conducive to the significant improvement of the scientific level of social management. For colleges and universities, the modernization, scientific and information management of scientific research management has created a good development atmosphere for scientific research, making universities become the frontiers of new ideas and new technologies^[1-3]. Through information management, information resources can be simplified, quickly and conveniently communicated, and office efficiency is significantly improved^[4-7]. Through the establishment and application of information networks and information bases, various scientific research management work can be standardized to make information inquiry, filing and change faster. In addition, research managers are more scientific in decision making. As a scientific research position with highly concentrated knowledge and highly intensive talents, decision-makers can accurately judge the direction of scientific research based on real information, and improve the decision-making level under the advantage of information sharing, accuracy and timeliness^[8-9]. This paper takes the scientific research management information as the main line, studies the current problems of universities in the process of informationization, and puts forward the perfect countermeasures.

The Significance of the Informationization of Scientific Research Management in Universities

Improve the efficiency of scientific research management

The use of scientific research management information in universities can effectively improve work efficiency, make information interaction more convenient and faster, further simplify the cumbersome procedures in the work, and increase the efficiency of human and material resources^[10]. By improving the school's office efficiency, it is possible to enhance the rapid development of various scientific research projects. Relevant departments can also query relevant scientific research project information through the campus network, publish relevant scientific research results online, and also realize resource sharing. Through the informationzation of scientific research management, universities can accelerate the transmission and feedback of information and further improve the efficiency of related work.

Improve the level of scientific research management decision-making

Informatization management of scientific research projects can increase the knowledge of the school's talents or contribute to the summary of knowledge^[11]. Therefore, the construction of scientific research information can also get rid of the shackles of traditional management models, break the obstacles of time and space, and enable school talents and managers to share resources through the Internet. Through the information management of scientific research and management, the information can be transmitted all over the world, and the information and data needed from all corners of the world can be searched, which helps to improve the timeliness of information, and can help university scientific research projects to smoothly carry out management decision-making.

Problems Existing in the Informationization of Scientific Research Management in China's Universities

Backward research management model

Informatization of scientific research management is the top priority in the current reform and management of universities. By changing the traditional backward management system and introducing advanced management experience based on information technology, the school management department has gradually improved and developed in the direction of informationization and networking. In order to carry out scientific research management innovation, universities must abandon the traditional backward management mode, adapt to the trend of the times, adopt information technology and enhance information management, which helps to break through the information management limit.

Misunderstanding the lack of development

Although most universities in China have hardware equipment and information management systems, due to insufficient application of information technology, the degree of software development is not enough, and it is difficult to coordinate the development of the database. The waste of resources and the formation of strong planning have led to loose research and management. University administrators have not strengthened their awareness of information technology, and they understand the importance of information management in scientific research projects. They have not regarded information technology as an important service tool for school development, which has led to limitations in the development of scientific research management in universities.

No accurate positioning

In the process of development, universities did not accurately locate the scientific research management direction, or it was one-sided positioning, which led to the imperfect development of information technology. Since the informationization of scientific research management in universities is a major process, it is difficult to achieve in a short period of time, and it is necessary to make overall plans. However, in the process of development, universities have not combined the scientific management principles for efficient development, which makes the development process lack of overall planning, applicability and advancement.

Countermeasures for the Improvement of Scientific Research Management in Universities

Design information platform

The overall structure of the scientific research information management system affects the functional architecture design of the scientific research management information system. The system is divided into two parts: foreground application and background maintenance. The overall structure function is shown in Figure 1.



Figure. 1 Overall structure function diagram

The uncertainty of scientific research has led to the complexity and dynamics of scientific research management. Therefore, scientific research management cannot be managed by experience alone, and it is necessary to continuously learn to supplement and update management knowledge and management methods. In combination with the construction of learning organizations, the research will be integrated into the management of large projects. The management team will jointly study and solve the problems in management, and will manage the papers and experiences as part of the project results.

The design of the local university scientific research management information program architecture is shown in Figure 2.



Figure. 2 System program architecture diagram

The university scientific research management system should be the digital statistics and analysis of the university's overall scientific research information resources. It should optimize the scientific research information management, optimize the management of various scientific research business processes, give full play to the core role of scientific research management, and improve the economic benefits of scientific research management. Reduce the cost of scientific research management and promote better and faster development of scientific research.

Scientific management system function design

Information release is an important way for scientific research managers to communicate with scientific research personnel. Scientific research managers can release information and receive information through the system. Researchers can also notify the system to send information and

view information to managers. Scientific research managers and researchers can conduct scientific research business interaction through information release, and keep abreast of scientific research trends. At the same time, through news and early warning, managers can timely grasp the scientific research dynamic information, strengthen communication with scientific research personnel, and conduct business reminders. The information publishing function is shown in Figure 3.



Figure. 3 Information Release Function Chart

Research project management module design

There are vertical and horizontal projects for scientific research projects. The vertical project and horizontal project have different project and management. Therefore, different management functions should be designed according to the characteristics of various projects. The vertical scientific research project management function is the management of the basic information of the vertical scientific research project, including the project declaration, project establishment, mid-term inspection, completion, information change, project classification and other management. The longitudinal scientific research project management process is shown in Figure 4.



Figure. 4 Vertical scientific research project management flow chart

Different types of scientific research teams have different structural functions, and their construction and management methods should also be different. Choosing a management method according to the type of team or combining different management methods to achieve the best management effect is the best management method. This is the artistic value of management. The management of the research team is not only the responsibility of the team leader, but also the

responsibility and obligation of the management departments at all levels engaged in scientific research management.

Conclusions

This paper aims at the gap between the requirements of national innovation system construction on the scientific research management of universities and the status quo of scientific research management in universities. Combining with the work experience and thinking of scientific research management in universities, use relevant theoretical research to propose organizational structure through reform of scientific research management. And improve the quality of scientific research and management personnel to respond to the needs of the solution and implementation path. The research results of the thesis have important theoretical references for reforming the organizational structure of scientific research management, exploring new effective management methods, building an innovative scientific research management team, and improving the level of scientific research management. And then it can promote the scientific research innovation and the ability of serving the society and ractical application significance.

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