

# Innovation Path of Higher Education Management Informatization under the Background of Big Data

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**Abstract:** The 21st century is a century of information technology. The development of information technology is very rapid and has been applied to various fields in China. With the development of the information age, college education has also made innovations, especially under the influence of information technology, the innovation and reform of management informatization has reached a new peak. The improvement of management informatization level directly improves the efficiency of college management. Therefore, it is of great significance for higher education management to use the means of management informatization not only to improve students' performance, but also to promote their all-round development. This paper will discuss the problems in the informatization of higher education innovation management, the significance of the application of management informatization to higher education, and the strategies for the informatization innovation of higher education management in the context of big data.

**Keywords:** Big Data; Higher Education; Management Informatization; Innovate

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## Introduction

The mainstream of modern education reform is education informatization. The arrival of the big data era has given a new direction to the development of education. Strengthening the construction of the management informatization platform of higher education institutions, promoting the sharing of educational information resources, and enriching the functions of the management informatization platform are the contents that universities are constantly exploring today. The development of information technology has brought great convenience to people's lives. The application of information technology in university management will certainly improve management efficiency. At present, there are many shortcomings in the application of big data technology, and the construction of management information platform has been limited to some extent. However, education information is an inevitable trend of China's education reform. All universities should continue to explore and successfully complete the innovative development of management information.

## 1. Problems in Informatization of Innovation Management in Higher Education

### 1.1 The concept of information management in higher education is not deep enough

In order not to be eliminated by the development of the times, colleges and universities have also chosen to carry out teaching management by means of informatization under the background of current big data. However, from the perspective of the information technology used in the current management of colleges and universities and the relevant implementation plans, the informatization model of college education management is not perfect, especially some managers have outdated ideas and are unwilling to learn the relevant knowledge of management informatization, It is difficult to make progress in the innovation of management informatization. Under such circumstances, it is difficult for universities to achieve innovative development of management informatization.

### 1.2 Data management lacks unified standards and data management is not organized

Under the environment of big data, the application of data is of great significance. The construction of education management informatization cannot be separated from the support of databases. However, there are many, disordered and disorganized data in colleges and universities. After investigation and research, it is found that many colleges and universities have no

unified standards for data management. Therefore, a large amount of data collected has been put into the database. It is very difficult to query the data. At the same time, there is a lack of unified standard data, and its quality is uneven. Even wrong data, abnormal data, duplicate data, etc. have been included in the database. The integrity and accuracy of the data can not be guaranteed, and the innovation and development of university management informatization can not be effectively carried out, If we want to make a qualitative leap in the innovative work of management informatization, we must solve the problem of lack of unified standards in data management.

## **2. The Importance of the Application of Management Informatization to Higher Education**

### **2.1 It is conducive to improving the efficiency of university management**

Before the arrival of the big data era, network means have not been applied to the management of colleges and universities. People are still unfamiliar with the word "management informatization". The management of colleges and universities needs to be carried out no matter in which era. There are several drawbacks in the traditional management model of Chinese colleges and universities. The concept of teaching management is not clear, which is seriously behind the development of colleges and universities, Secondly, the traditional management mode attaches too much importance to the authority of administrators, which leads to the phenomenon of arbitrariness and authoritarianism. It is unable to brainstorm, and its democracy is too low. This is one of the reasons why the traditional management mode has been eliminated by the times. Management informatization is a new management mode hastened by the arrival of the information age. Management informatization integrates advanced management concepts with modern information technology to improve management efficiency. The problem of lack of clarity and democracy in management concepts in major universities can be solved. In addition, modern information technology is applied to management work to simplify the links of management work, all data input Data integration and other work can be handed over to advanced electronic equipment, freeing the hands of managers, reducing the error rate of work, and improving the efficiency of management.

### **2.2 It is conducive to promoting the innovation of university management technology**

The application of modern information technology to college teaching is a hot spot in today's teaching reform. After years of exploration and development, it is still not mature enough. Nowadays, higher education management informatization has become an irresistible development trend. The development of management informatization cannot be separated from the support of modern information technology. Modern information technology covers a wide range, mainly referring to microelectronic technology, optoelectronic technology, communication technology, network technology, control technology, display technology, etc. Its core is informatization. If colleges and universities want to realize the innovation of management informatization, they must introduce modern information technology into management. The traditional management mode of colleges and universities is single and the means are backward, which can not meet the needs of diversified development of students in today's era. In the process of introducing big data technology to carry out education management, digital and information-based teaching management mode has been constructed, network technology and teaching management have been organically combined, and the development of teaching management has shown a new state of development, gradually realizing the innovation of management technology, so that university management can be carried out stably and for a long time

## **3. Strategies for information innovation of higher education management in the context of big data**

### **3.1 Establish modern teaching management concept and change outdated thinking**

The thoughts of university managers play a guiding role in their actions. Under the background of big data, it is essential for efficient managers to establish correct teaching management concepts if they want to make achievements in management information innovation. First of all, efficient managers should have a correct understanding of management informatization, deeply understand the importance of big data technology for university management, collect, screen, process and integrate all aspects of information of students anytime, anywhere, enrich and improve the information in the database, and build a relatively complete data information database. Secondly, change the traditional management thinking, from the perspective of modern information management, combine big data technology with school management, and realize that big data technology is a new management means in the information age. Realize the organic combination of university management and information technology.

### **3.2 Create a reasonable teaching management data platform and improve the data integration mechanism**

The integration of management data is an important link in the development of management work. If you want to achieve innovative development through management informatization, the key lies in the comprehensive collection of information in the school and its dynamic circulation. If you want to achieve circulation, you must establish a large platform for teaching management data, on which the collection, upload, storage and other functions of information in the school are established, so as to form a complete data information database. The construction of teaching management data platform can use information technology to complete a number of tasks, saving time and effort, and improving the efficiency of management in a short time.

### **3.3 Adopt information-based teaching mode and improve educational resource data system**

The innovation and development of college management informatization is an important part of the reform of education informatization. Big data technology is the product of the development of the information age. Informatization teaching is also a new teaching mode. The integration of the two is an important means to promote the innovation of higher education management informatization. Therefore, in actual college teaching, teachers need to consciously combine big data information technology with classroom teaching. Through the big data technology, students can be analyzed in real time and uploaded to the management data platform, so that the data information can be updated at the first time, and then the existing problems in current teaching management can be analyzed in a timely manner, and corresponding adjustments can be made, make education management informatization truly contribute to the training of college talents.

## **4. Conclusion**

Under the background of big data, the innovation of higher education management informatization is an inevitable requirement for colleges and universities to adapt to the development of the times. At present, the reform of education informatization has received extensive attention from the society and the country. Colleges and universities are the leaders of the national education development. Even if they encounter many difficulties on the way of management informatization innovation reform, they can't retreat. They should overcome the difficulties and successfully complete the innovation and reform task of management informatization. The innovation of management informatization is not achieved overnight. It is necessary to explore step by step in ordinary management, find and solve problems, enhance the importance of management informatization innovation, and accelerate the development of management informatization.

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