#### Journal of Contemporary Educational Research

**Review Article** 



#### Analysis on the Development of Higher Education Management Innovation under the Background of Cyberspace

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**Abstract:** In recent years, with the rapid development of network technology and the rapid expansion of cyberspace, the efficiency of information dissemination of teachers and students in colleges and universities has become more and more demanding. The development of higher education management in various institutions has become a trend of the times. Based on this, higher education management, as an important part of the development of colleges and universities, rationally understands the problems existing in the construction of higher education management in the context of cyberspace, and explores the path of network construction of higher education management, which can effectively reconstruct the entire higher education system. It fundamentally boosts the quality of education in colleges and universities and promotes the structural transformation and upgrading of higher education.

**Keywords:** Cyberspace, Higher education management,

Innovation development

Publication date: November, 2019Publication online: 30 November 2019

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#### 1 Introduction

Alvin Toffler emphasizes "who has the information, who controls the network, who will own the world." In the new era, the scientific and technological revolution and the industrial revolution in the world, talents become the key factor of competition. With the development of network, the traditional education management model has a certain degree of limitation, and it has not been able to adapt well to the needs of real development. In recent years, network technology

has set off a "Copernician revolution" in the field of higher education, a wide range of distance education, "Stanford University's Open Loop University", University of Minerva (Minerva School's O2O-style school-running system has challenged the traditional education management model, and education informationization has finally moved from the edge to the center. The school has accelerated the construction of education management information, and has become a strategic action to promote deepening reform and innovation in the field of education management in colleges and universities<sup>[1]</sup>.

In the context of cyberspace, China's higher education management has made great progress. For a long time, the construction of network infrastructure has gradually improved, the level of informatization has been significantly improved, and the role of network technology in the transformation of college teaching has become apparent. At the same time, some contradictions have inevitably emerged. In view of the dilemma faced by the development of higher education management in the context of cyberspace, exploring the profound implications of innovative development of higher education management in cyberspace can provide a perfection and upgrade for higher education management. Feasibility plan.

## 2 The development of cyberspace is a new challenge for higher education management

The rapid development of modern information technology marked by the Internet has caused unprecedented changes in human society in all aspects. In the face of the network, we can no longer just regard it as a new type of technology or a new medium. Instead, we should change our perspective and divergent thinking, and regard it as a new type of space and realistic space. It is also the performance of social space in the information age form. Nowadays, the development of cyberspace has already greatly exceeded the imagination of the people at the beginning of the Internet. The network social space and the real social space are blending and enveloping, and the boundaries between the two are gradually disappearing. "Network space, as the connotation and extension of the real society, has all the elements of social activities and is a real space for interpersonal communication and social interaction." Within this space, there are more and more people in the world, and the current number is still growing<sup>[2]</sup>. People of different nationalities and regions in different corners of the world will gather in the same circle in the network for a certain purpose. It not only promotes social development and progress, but also profoundly affects people's way of thinking and living habits.

In the context of "cyberspace", the increasingly active thinking styles and increasingly individualized learning requirements of the new generation of educators are all indistinguishable from the traditional higher education management model. "The theoretical knowledge transfer that has been solidified in classroom teaching has become less and less suitable for the social change requirements of rapid development. This is not only reflected in the single-oriented form of higher education, it is difficult to stimulate the interest of college students, but also in accepting obsolescence and stereotypes. Graduates of higher education are weak in the competitiveness of the job market." Obviously, relying solely on the knowledge transfer in textbooks will lead to an ever-increasing gap between the era of rapid change<sup>[3]</sup>. If the precious study time is spent in the same place, when the students leave the school, the knowledge and learning has already become history, and naturally cannot adapt to the objective requirements of the workplace. Therefore, Internet-based higher education needs to be discriminated against specific types and content, thus ensuring the cutting-edge and modernization of university education management, allowing college students to draw the most advanced theoretical knowledge in the networked knowledge ocean, while using the network. A broader, broader form of high-end education enhances practical awareness and ability.

In the past, due to technological lag, lack of data, limited information, and the lack of digitization of information, the cost of acquisition was high, and there was no basic condition for higher education management. The formation of cyberspace provides the basic guarantee for scientific precision and effective management. However, when a large amount of complex and non-mainstream information appears in front of us, managers are often lost in cyberspace due to the lack of effective management methods. Instead, they will feel helpless, which is a new challenge facing the current management of higher education. The main performance is: in the cyberspace, education managers, business management procedures, management techniques and management mechanisms are imperfect, and important decisions often rely on the intuition and experience of managers, rather than the platform of full interest cyberspace. Scientific management requires managers to use network technology to develop standardized management processes and countermeasures in the context of fully utilizing the management model that is compliant with the development of the Internet era, thus forming scientific management.

# 3 The practical significance of developing higher education management in cyberspace

Through the analysis and research on the situation of higher education management in the current cyberspace, the paper deeply understands the necessity of developing higher education management in cyberspace. Coupled with the rapid expansion of cyberspace in recent years, it is of great practical significance to develop higher education management adapted to the Internet age.

#### 3.1 The content of higher education management mode has been broadened in cyberspace

Higher education management has become an important part of higher education. With the intervention of the network, the management model of higher education still has defects. The form of higher education management is relatively simple, and only some students can learn in accordance with the unified teaching method. "Currently, the university education mode is mainly classroom teaching, special lectures, etc. Nowadays, the rapid development of information technology can greatly expand the content of university

management education mode through the network, not only limited to traditional classrooms and special lectures." In the context of cyberspace, students can choose what they want to learn based on their hobbies and interests in multiple online courses set up in colleges and universities<sup>[4]</sup>. Colleges and universities do not mandate which courses to watch, but credits can be marked for courses of different difficulty and range. Students can get corresponding credits after watching online courses and completing online tests.

### 3.2 Increasing the fairness of the mode of teaching students in cyberspace

The traditional education model is susceptible to factors such as teacher strength and geographical environment. In some remote areas, there are no professional education teachers, and most of the teachers who teach courses are multi-disciplinary teachers, which are basically "half-way." Because these teachers have insufficient professional knowledge teaching experience, books alone cannot enable students to learn better professional knowledge. Therefore, in the context of cyberspace, the fairest way of education is online education. At the same time, personalized education for professional education also requires online courses. The biggest difference between online education and traditional education in the context of cyberspace is that traditional teaching cannot take into account individual differences, while online teaching can, so it fundamentally has the basis for implementing personalized education. Based on the above points, the cyberspace can greatly increase the fairness of college students' teaching model. The education model in the context of cyberspace can take into account the needs of each student. Therefore, education in the context of cyberspace can basically achieve fair education.

### 3.3 Providing more convenience for higher education management in cyberspace

Under the background of cyberspace, the higher education management model can realize all-round management, coupled with rich and varied teaching activities, which can fully mobilize the enthusiasm of students. However, in the traditional higher education management model, students simply accept the indoctrination of knowledge and cannot mobilize the enthusiasm of students to actively learn. Moreover, teachers and students are not equal relationships, and

there are hierarchical "obstacles" from beginning to end. In the past, most of them were classroom education. Teachers faced dozens of study lectures on the stage. They only focused on the progress of most people, and could not ensure that every student fully digested the knowledge. Some students do not understand the knowledge, and more and more doubts, it will lead students to give up learning. This is very unfavorable for the development of students. However, in the context of cyberspace, information resources are abundant, students can find answers to any questions that are doubtful on the Internet, and they can also interact with scholars and experts through the cyberspace platform. At the same time, the network also provides convenience for teachers. In the process of education management, the use of the network can promote teachers' more vivid teaching, and students can better understand what they have learned. At present, the rapid development of the network has also led to the development of mobile Internet and data terminals. Students can ask questions to teachers through education forums and WeChat at any time. Teachers can also answer questions from students in time through these platforms, which is conducive to promotion. Better communication between teachers and students can also promote better learning for students.

## 4 The path choice of promoting higher education management in cyberspace

The rapid development of the network has brought more convenient learning and life to people. The deep integration of network technology and higher education management is the inevitable future development of higher education management work, and it is also the trend of universal development. In view of the problems existing in the management of higher education in the context of cyberspace, a corresponding improvement path can be proposed.

#### 4.1 Strengthen management and improve the system

At present, the higher education management system includes the standardization system and the promotion system. To use the development of cyberspace to promote the reform of the education management mechanism, we must start from perfecting these two types of systems. "Higher education management system and incentives for colleges and universities in cyberspace. Still in the exploratory stage," Lack of

integrity, systemicity, stability and sustainability<sup>[5]</sup>. From the practical experience of relevant universities, first of all, it is necessary to set up a special cyberspace informationization construction functional organization, with the leadership as the head of cyberspace informationization construction, and the education informationization administrative function management department to be responsible for the specific information construction business. Advance and technical support, clarify its scope of responsibility in the construction of education informatization, establish an effective accountability mechanism for cybersecurity, ensure the healthy and orderly advancement and development of informatization construction; secondly, formulate cyberspace application management methods, corresponding in the country Based on the laws and regulations, it can be tailored according to the actual situation of each school and region. The formulation of the method must be feasible, sustainable and innovative. In this way, the education and management behavior of cyberspace can be realized. At the same time, actively promote the transformation of higher education management mechanisms.

### 4.2 Deepen technological development and promote effective use

The effective management and rational application of network resources is the core issue in promoting the reform of higher education management mechanism. In today's era, the rapid development and scale of cyberspace is unimaginable, but in such a huge cyberspace, when education policy decisions are often used, there is often no support for finding available cyberspace rules. The problem, "sometimes there will be a lot of manpower and material resources to find support technology to solve a certain problem, which greatly reduces the efficiency of using the network and is not conducive to the reform of the higher education management mechanism." The reasons for the above problems are management and technology<sup>[6]</sup>. Therefore, we must first integrate network resources, upgrade the network infrastructure, transmission network, storage and analysis systems, and analyze the established network space in detail. And rational classification treatment, which can effectively promote resource co-construction and sharing, improve the management level and utilization efficiency of higher education in cyberspace; secondly, "to

develop technology, the existing technologies such as network application and cyberspace development are still not mature. By breaking the traditional model by increasing investment," Starting from the development of network technology, create efficient storage technology, analysis technology and reasonable processing model<sup>[7]</sup>; finally, mining the network space, discover the association rules and classification rules hidden inside the network space, these rules can optimize resource allocation, is to improve Teaching work efficiency, improving higher education management methods, and promoting important means of reforming higher education management mechanisms.

### 4.3 Strengthening security and establishing management practices

The key factors of education management system in cyberspace are the issues of data security and privacy protection. At the same time, it is also an unavoidable reality of network technology application and development. It must be addressed and solved reasonably. Network application is mainly based on people in education management mechanism. "If people's data privacy is not secure, then the network will be hindered by the reform of the higher education management mechanism." First of all, the state should improve relevant laws and regulations, clarify the standard system, fill the gaps in the construction, circulation and use of the cyberspace, and severely punish the illegal acts that violate the privacy of others<sup>[8]</sup>. Secondly, improve the unified data standards. Currently, many universities Inconsistent data standards lead to increased data security risks and increased risk of network vulnerabilities. Therefore, it is necessary to formulate unified university data standards and enhance the security of educational big data. Finally, establish a privacy protection application specification for cyberspace, and over time the updating of technology, the increasing amount of data storage, the deepening of network technology mining, and the openness of cyberspace may lead to unpredictable network security problems. Therefore, we should formulate reasonable, feasible and sustainable from the perspective of peopleoriented. Network space application specifications, reasonable restrictions on network usage and data mining, can effectively improve the security of network space.

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