



# The Facility Management in Chinese Public Universities Today: Problems and Solutions

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**Abstract.** In recent years, with the rapid development of higher education in China, state-owned universities and colleges, as the most essential component of higher education, have assumed the vital task of training talents in various professional fields. According to the requirements of the Chinese government on the facilities management of universities and colleges, universities and colleges are required to set up facilities management companies to operate the facilities of universities and colleges and better serve the students and teachers on campus. Whether the facilities management of public universities and colleges is effective will directly affect the facilities utilization rate of public universities and colleges and then affect the teaching quality. In the last 10 years, according to the policy requirements, the facilities management work of Chinese universities and colleges has carried out deep reforms. However, some problems still have had a certain influence on the development of public universities and colleges. Based on sorting out the development process of public universities and colleges, this paper will analyze the existing problems in the facilities management of public universities and colleges and propose specific solutions.

**Keywords:** Chinese public universities · Facility management · social benefits

## 1 Introduction

As an essential part of Chinese public institutions' national assets, the facilities of public universities and colleges are not only the material base for maintaining the development of public institutions. But also the scale of running schools and the rate of scientific research, and even directly affect the quality of university personnel training. Therefore, the effective management of the public university and college facilities is significant to developing universities and colleges and social culture and economy. Moreover, as an essential carrier of higher education, the facilities of public universities and colleges are the basis for all kinds of work. However, along with the scale expanding gradually, the state's financial input is also steadily increased. In this situation, our country's universities and colleges have accumulated a certain amount of state-owned assets. Because of the complexity of the sources of assets and the outflow, the imperfect existing management system, the asset management of our country's universities and colleges will create new problems.

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Y. Liu and S. Chujarjeen (Eds.): ICEHUM 2022, ASSEHR 741, pp. 341–350, 2023.

[https://doi.org/10.2991/978-2-38476-040-4\\_28](https://doi.org/10.2991/978-2-38476-040-4_28)

## 1.1 Background and Context

With the development and progress of China's education cause, the number and scale of Chinese colleges and universities are constantly expanding. Colleges and universities have played a promoting role in cultivating high-quality talents. The school facility is the primary condition and hardware guarantee of teaching development and scientific research activities in colleges and universities. Under the institutional framework dominated by relevant national laws and regulations, the school facility management system of Chinese universities and colleges has taken initial shape. Most universities and colleges have established school facility management companies according to the policy requirements.

Chinese universities and colleges face many problems in the school facility management process. This paper studies the current situation of school facility management in Chinese universities and colleges under the current management system excavates the existing deficiencies of school facility management in Chinese universities and colleges, and puts forward feasible suggestions for the operation and improvement of school facility management in Chinese universities and colleges.

## 1.2 Problem Statement

To realize the value preservation and increment of the school facility and the transformation of scientific research achievements, many enterprises have been established in Chinese universities and colleges. Still, many enterprises are not related to colleges and universities teaching development and scientific research activities. In order to change the situation of unclear property rights between school facility and enterprises and chaotic internal organization, the Chinese government requires universities and colleges to set up state-owned facility management enterprises and entrust state-owned facility management companies to manage facilities of universities and colleges, realizing the separation of ownership and management rights. "Guiding opinions of The General Office of the State Council on institutional Reform of Enterprises affiliated to universities and colleges" issued by the General Office of the State Council called for classified management of different enterprises, sorting out and closing the enterprises that rely on government subsidies or bank loan renewal for survival, separating from the enterprises irrelevant to the scientific research of colleges and universities, retaining the key scientific research enterprises of colleges and universities, and implementing centralized supervision of enterprises. The reform of state-owned facility management in Chinese universities and colleges has been completed, but new problems have emerged. In the initial stage of establishing a China school facility management corporation, its development speed was slow. The management concept and mode before the reform are not applicable now, and the management mode and personnel need to be readjusted. The educational development and scientific research activities in colleges and universities should ensure the combination of students' theory and practice and guarantee the maintenance and increase of state-owned facilities. The management of state-owned facilities in Chinese universities and colleges still needs to be explored.

### 1.3 Relevance and Importance of the Research

This paper suggests suggestions for promoting school facility management development goals in Chinese universities and colleges. The main contributions are as follows: Firstly, analyze the problems existing in the management of school facilities and give suggestions to improve the rules and regulations of school facilities management companies. Secondly, optimize the management structure and formulate the task mechanism reasonably. Thirdly, strengthen risk awareness, realize the integration of the benefits of school facilities and social benefits, and synchronous development of market competition and scientific research transformation.

## 2 Literature Review

### 2.1 Key Concepts, Theories, and Studies

On October 22, 2005, the Chinese Ministry of Education issued “The Guiding opinions of the Ministry of Education on actively Developing and Standardizing the Administration of Science and Technology Industry in Colleges and Universities”. It required the Chinese public colleges and universities to form new wholly state-owned facility management companies or to select existing school-run enterprises with clear property rights and standardized management systems. Public universities and colleges transfer all of their operational assets to facility management companies which manage the operating assets of the universities and colleges on behalf of the schools. The primary value of school facility management companies lies in maintaining and increasing their facilities, which are their essential task and fundamental development goal.

### 2.2 Key Debates and Controversies

In 2017, in the Journal “Economic Research Guide”, Peng Fan, Shenghai Yang, and Su Shan published “Discussion on problems and countermeasures of standardized management of commercial assets in colleges and universities”. The paper points out the shortage of standardized administration of operational facilities in colleges and universities. Furthermore, it puts forward the supervision measures for the operational facility in colleges and universities. The research results of this paper provide guidance for ensuring the management of the state-owned facility in colleges and universities on the right track, perfecting the long-term mechanism, ensuring the value preservation and appreciation of state-owned facilities, and the continuous progress of higher education.

Wei Zhang analyzed the market environment and the development trend of universities and colleges facility management companies in the article “Discussion on management problems and countermeasures of university asset Management Companies”. He pointed out that state-owned facility management companies lack the consciousness of the market subject. Therefore, many deficiencies exist in state-owned facility management in universities and colleges.

### **2.3 Gaps in Existing Knowledge**

In recent years, Chinese scholars have detailedly analyzed the management of state-owned facilities in Chinese universities and colleges. Schools state-owned facilities management companies established in Chinese face a series of new problems in the actual operation process. Previous literature had studied the existing issues before the school enterprise system was reformed. However, this paper will analyze and study the problems existing in state-owned facilities management of Chinese universities and colleges. After the enterprise system reform, it tries to put forward solutions to the issues and establish a scientific and standardized management system to ensure the safety of state-owned facilities and promote the development and progress of education in China.

## **3 Development of Facilities Management in Stated-Owned Universities and Colleges in China**

The facilities management of state-owned universities and colleges in China has undergone four stages: initial stage, exploration stage, development stage, and standardized development stage.

### **3.1 Initial Stage**

In the first stage, in line with China's planned economic system, the development of state-owned universities and colleges will be carried out according to established plans. The competent government departments will issue the procurement and use of internal facilities with specific notices. In the initial stage, the facilities of state-owned universities and colleges are relatively simple and of low value. In the era of slow economic development, this facility management mode can realize centralized management of resources, facilitate accounting calculation, and not easy to breed corruption. On the other hand, the disadvantages of facility management in the initial stage are also very obvious. The dynamic adjustment mechanism of facility management is very scarce, and the efficiency of facility adjustment is extremely low when the resources needed change.

### **3.2 Exploration Stage**

After 1978, along with China's reform and open policy, the enterprise system began to carry out deep reform. At this stage, although state-owned universities and colleges are still the attributes of public institutions, together with the restructuring of enterprises, they actively plan their development, strive for first-class schools, start to finance from financial institutions, actively purchase all kinds of facilities suitable for the development of schools, and initially change the situation of school facilities depending on the state allocation. At this stage, the most essential thing is borrowing from financial institutions, which provide fresh blood to procure facilities for universities and colleges. It provides the basis for the subsequent development of public universities and colleges.

### 3.3 Development Stage

At this stage, the most crucial change was that the Chinese government allowed colleges and universities to set up subsidiary enterprises that were explicitly responsible for managing and operating facilities. As a result, the school management has complete control over the company that runs the facility, and the efficiency of the facility is greatly improved. However, this model also exposes many disadvantages. First, the school management personnel lack experience in enterprise operation, and some decisions lack scientific basis. Second, the management personnel of the facility management company has the dual identity of school staff and enterprise management personnel, causing the work efficiency is not high.

### 3.4 Standardized Development Stage

After China entered the WTO, various regulations on standardized management of state-owned assets were introduced successively, requiring Chinese institutions to carry out facilities management according to law. In this context, our country has begun to carry out the inventory of the facilities of universities and colleges and found that most public schools have idle non-operational assets. At the same time, the property rights of operational assets are chaotic, which leads to the unreasonable allocation of resources. Therefore, after the end of the inventory, Chinese universities and colleges began to standardize the management of school facilities in accordance with the provisions of state-owned assets management.

## 4 Analysis of Facilities Management Problems of State-Owned Universities and Colleges in China

Since 2000, the Chinese government has required universities and colleges to standardize the management of school facilities per laws and regulations. Up to now, the basic requirements of university and college facilities management have not changed fundamentally. After more than 20 years of development, university and college facilities management of new problems gradually exposed.

***4.1. Universities and colleges have relatively weak awareness of facility management and pay insufficient attention to it. Especially since 2007, China's infrastructure construction has been developing rapidly.***

Spurred by the release of 4 trillion yuan of water, most provincial capitals in China have started to build university towns. While constructing university towns, universities and colleges apply for project financing from banks. Still, the infrastructure of the schools after completion is state-owned assets and cannot be used for mortgage financing. As a result, most Chinese universities and colleges are beginning to face significant debt pressure. Simultaneously, influenced by the public institutions' accounting, under the background that the operating facilities of universities and colleges have all been allocated to the facilities management company for operation, the income generated by the operational assets cannot be used for the university to repay the financing principal and interest. As a result, the management of universities and colleges began to

pay less attention to the operational assets of universities, believing that the operational facilities could not help the university's development. As a result, the school's management neglects that it can improve the efficiency of operating facilities, provide scientific research funds for the leading programs, combine industry with research, lay a solid material foundation for talent training, and promote further school development.

To sum up, for a long time, public universities and college administrators believed that public schools belonged to the construction of national investment. As a result, the universities and colleges were only responsible for cultivating talents but ignored the management of assets. As a result, most universities and colleges in China have missed the opportunity to develop along with the rapid economic development.

***4.2. Universities and colleges do not know who is responsible for facilities management, and facilities management is confused.***

Before the establishment of management companies in universities and colleges, each department within the university was responsible for managing facilities. Still, there was no boundary of responsibilities between each department. No clear division of the right to earnings, occupation, and management of assets, so the overall management system was relatively chaotic. For example, the facilities management of some universities and colleges can only be jointly undertaken by multiple departments. The finance department is responsible for the management of monetary assets. At the same time, the Assets Department is responsible for the direction of the real estate. The most significant disadvantage of the above management mode is that it will lead to some facilities being left unaccountable, eventually leading to the control of facilities and the failure to play a role. Therefore, universities and colleges are required to set up facilities management companies. Still, due to the dual role of managers, most facilities management companies in universities do not play an active role as expected. In addition, as part of radical school facilities management, first-class universities establish operating facilities and gradually become a vast industry group. It can play a role in the development of the school, such as Beijing Jade Bird, its background of school facilities began to invest in various industries. And after the equity mix change gradually tends to profit as the goal, seriously deviating from the essential requirements of school facilities management.

***4.3. After universities and colleges set up facilities management companies, there is a disconnect between facilities management and budget management in schools.***

At the end of the 20th century, to cooperate with the reform of our public finance system, the education department required colleges and universities to complete the budget preparation at the beginning of the year and carry out the work by the budget. As a result, budget, financial, and asset management have become China's three major components of public university and college facilities management systems. Although some colleges and universities have implemented budget management in the natural environment, in the actual implementation process. However, because the university and college facilities management cannot be implemented in place, many colleges and universities have the phenomenon of asset accounting inconsistency, which leads to the amount and quantity of school facilities being unclear. On the one hand, universities and colleges lack supervision over the revenue generated by various operating facilities. On the other hand, many departments often have to pay for the facilities themselves, and this behavior is not reflected in the university's assets.

On the other hand, universities and colleges will receive a certain amount of alumni and social donations every year. Therefore, other in-kind implementations may miss the registration in addition to the accounting management of the donated funds. In addition, when the school facilities are dismantled and scrapped, there may be the possibility of not going through the corresponding scrapping procedures, which is always in the book and fundamentally leads to the inconsistency of the accounts and facts of the school's facilities.

***4.4. Facilities are managed by law, but detailed internal rules and regulations are lacking. Therefore, the asset management system of China's state-owned universities and colleges is essential for developing facilities management.***

Without practical institutional reference, facilities management will be challenging to implement. Currently, most state-owned universities and colleges only focus on the legal compliance of the purchase or construction of facilities and carry out the procurement and construction through bidding. There is no corresponding management system for the facilities management of universities and colleges after accounting. The imperfect system and poor operability lead to serious problems in follow-up management. In addition, management standards are often inconsistent in the same facilities in different use environments. The lack of a basic management system will lead to repeated purchasing assets in state-owned universities and colleges. Furthermore, limited facilities will lead to a severe waste of resources.

## **5 Countermeasures for Facility Management of State-Owned Universities and Colleges in China**

University and college facilities management is an essential foundation for promoting higher education teaching, scientific research, and other work and is an integral part of our national assets. Only by giving full play to the overall benefits of university and college facilities can the current value of assets be realized fundamentally and the development and innovation of universities and colleges be promoted. At present, the facilities management of many domestic universities and colleges has not been paid attention to. The school management does not pay attention to the facilities management work. The management system is too chaotic and not rigorous enough, the management means are too backward, and the facilities management work of universities and colleges is not standardized enough. In addition, the under-utilization of university and college facilities has dramatically hindered the development and innovation of schools. In conclusion, it is necessary to strengthen the understanding of university and college facilities management when COVID-19 prevention and control are becoming routine and students are often unable to go out of campus. Change the development concept, constantly improve the development system, and fundamentally improve the innovative work of school facilities management.

***5.1. The relevant departments of the Chinese government need to carry out in-depth institutional reform of facilities management in universities and colleges. In addition, state-owned universities and colleges need to apply for funding, which is approved by the central or local government and then disbursed.***

For example, when a university or college needs to build a new teaching building, in addition to the approval of the National Development and Reform Commission, the school also needs to apply for capital from the higher competent authorities. Then the competent authorities agree to apply for a bank loan to carry out the subsequent project construction. The above model leads to the dependence of universities and colleges on the appropriations of the higher authorities, and the examination of the funds used by the education authorities is relatively relaxed. Government departments can try to carry out system reform and relax the control on the income and expenditure of universities and colleges with high-quality, profitable assets. And make use of the professional and technical advantages of schools to increase the profitability of operational facilities to ensure the normal development of their main education business. At the same time, the new system needs to open up the scope of use of profit-generating facilities so that schools can freely use the profit funds. The new system reform can not only improve the efficiency of operating facilities in schools but also reduce the financial pressure on governments at all levels, enhance the sense of ownership of school administrators to school facilities management companies, and realize a virtuous circle of university and college facilities management.

***5.2. The facilities management work of Chinese universities and colleges should strengthen the construction of the team of facilities management personnel.***

At present, the senior management personnel of facilities companies in Chinese universities and colleges basically have dual status, which is not only the faculty of the university but also the management personnel of the facilities management company. In this case, the facility management company's management personnel lacks enterprise management experience. As a result, the time and energy invested in the facility management work are limited, which is not conducive to the school facility management work's long-term development. Therefore, to fundamentally strengthen the facilities management of universities and colleges, we must actively recruit management talents with enterprise management experience from outside the school and enhance the construction of the school facilities management team. In addition, in terms of performance evaluation, all staff involved in the management of school facilities, whether internal staff or external recruitment staff, should be paid more according to the actual performance to fundamentally improve facility management staff's enthusiasm.

***5.3. Chinese universities and colleges should have a reasonable allocation of facilities. But, first, the school should realize the centralized management of asset allocation to avoid the formation of inadequate facilities by various facilities' demand departments.***

Currently, China's state-owned universities and colleges have set up facilities management companies. The company should position itself as a professional facility management organization and set strict facility allocation standards. Secondly, complete the configuration according to the standard content. To better carry out asset accounting, classify the materials according to their functions and make standard configurations according to the department's situation. For example, some of the higher values need to use a set of large instruments and equipment, and specifications are too complex, the value of standard configuration. Finally, we should pay attention to the mandatory composition. That is, the standard of structure should be determined by the professional



department, except in exceptional circumstances, other departments must strictly follow the implementation requirements. They are not allowed to change the standard of configuration. The school should set up a special evaluation department to investigate each department's actual situation and demand and determine the allocation standard according to the budget situation. In case of large fluctuations in the external environment, such as large fluctuations in the purchase price of facilities, the allocation method should be adjusted in time.

#### ***5.4. Universities and colleges in China should strengthen the management of the formation and acceptance of facilities.***

First of all, schools should build a prudent argumentation system. Before establishing the facility, the school must carefully demonstrate the tender's procurement and construction activities. To form the cost and benefit of the facility to evaluate the necessity of the formation of the facility. External evaluation agencies must provide professional feasibility studies before proceeding with the next step for facilities construction projects with a considerable investment scale. Secondly, the school should establish a standardized procurement system. After fully understanding the actual needs of each department in the school, the school should build a detailed procurement plan, conduct procurement in an organized manner, and make the procurement price transparent according to the principle of reasonable expenditure and market rules to avoid corruption. Finally, the school should implement a strict acceptance system. The management of school facilities is not a simple step. In the administration after the completion of procurement, the facilities of state-owned universities and colleges need to be effectively managed. To complete the acceptance of facilities, the quality and quantity of facilities need to be reviewed in detail to ensure that the procurement facilities can provide services for the development of schools. For completed large-scale infrastructure construction projects, professional social audit institutions should be entrusted with audit and financial accounting.

## **6 Conclusion**

In a new normal environment, as China enters the 14th five-year development plan, combining new COVID-19 pandemic prevention, facilities managers of China's state-owned universities and colleges should timely adjust the management concept. With the help of a new way of management, the facility property right belongs to the school. The facilities management company responsible for operating system security continues to perfect the protection system. At the same time, Chinese universities and colleges should make a clear division of the types of facilities and conduct careful management on the basis of paying attention to the value of facilities to promote the process of state-owned facilities management system reform.

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