Design of Fixed Assets Management System in Colleges and Universities Based on Barcode and PFDI Technology

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Abstract. At present, many colleges and universities in China have a lot of assets to be allocated and managed. Assets are also the basis of all activities in colleges and universities. So it is very important to manage all kinds of assets, asset management is very complex, so how do we manage effectively? In this article, we introduce bar code and PFDI technology to the asset management of retrograde colleges and universities. This new technology greatly improves the efficiency of asset management in colleges and universities, and can effectively manage the assets of colleges and universities.

Keywords: Asset Management, Wide Variety, PFDI Technology

The management of fixed assets in colleges and universities is the basis of all activities in colleges and universities. Colleges and universities should strictly control all kinds of asset management, which can put an end to corruption in colleges and universities. Asset management is the lifeblood of economy for colleges and universities. On the contrary, poor management will cause waste of resources, increase the operating cost of colleges and universities, and even cause the loss of fixed assets. Since the establishment of our campus in 2001, it does not include books and star infrastructure. The fixed assets worth more than 500 yuan have reached 17383 pieces, with a total value of 49561307.54 yuan. I have fully studied the situation of asset allocation in our school [1-3]. Since 2005, our campus has introduced bar code technology into fixed assets management, and solved many problems encountered in our work. The author discusses the application of bar code in the management of fixed assets in our campus.

1. What is a bar code
Bar code we can see on many products, we buy goods from the supermarket have a bar code, bar code represents the attributes of the goods, each item has a bar code, bar code is mainly composed of three parts: regular arrangement of bars, empty, and its corresponding characters. Bar code technology is gradually developed later. With the development of computing technology in China, bar code is gradually traveling. Bar code technology is developed on the basis of computer technology and information technology. It is a technology that integrates coding, printing, identification, information collection and processing. It has the characteristics of fast, accurate, low cost and high reliability. It is the technical foundation of modern management and has remarkable economic and social benefits.
Figure 1. Bar code.

2. Bar code technology and fixed assets

At present, the application of bar code technology to asset management in colleges and universities has greatly improved the efficiency of asset management. It is a very creative idea. According to the actual situation of our school, the asset management department of the campus adopts computer management software. The management system has nine functions: data management, data query, report printing, system maintenance, data reporting, online data, data well-connected, asset inventory and help. The work flow is mainly as follows:

First of all, we purchase the equipment of the school, after the purchase of acceptance, personnel to formulate the relevant fixed assets report order, fixed assets management card and bar code label. The first line is the name of the equipment, the bar code and instrument number of the equipment below the page, the equipment number is unique, the equipment number can be found by the number, the equipment number starts from the input database, its custody, use, allocation until scrap processing, its equipment number will never change.

After the bar code is printed out, we paste the bar code on the fixed assets and ask for the front of the instrument and equipment [4-6]. The data collected on the spot are uploaded to the fixed assets management system, and the data in the control system are updated in order to query and call on the spot. We all know that different bar codes have different calibration techniques, as shown in the table 1, different numbers have different teaching methods, and bar code verification methods.

Table 1. Bar code check method

| Country Number | data character | check character |
|----------------|----------------|----------------|
| Data Character Location Number | 13 12 | 9 7 0 1 9 3 0 5 |
| Data character values | \ 9 7 0 1 \ 9 \ 0 \ |
| Position of even number | 2 9 \ 0 \ \ 9 \ \ 0 \ |
| odd position character | 2 \ \ \ 1 \ \ 3 \ \ |

3. Advantages of barcode technology in fixed assets management

3.1. Improved accuracy of fixed asset management

We all know that fixed assets have great use value, and the time that fixed assets can be used is also
very long, so the management of fixed assets must have certain accuracy, the use of bar code makes asset management more scientific. In addition. The label printed by bar code printer has the advantages of waterproof, oil-proof and tear-proof, which can ensure the long-term preservation and clarity of fixed assets label. Reduce the confusion of account information due to label shedding. Through the handheld data terminal, the physical information and the information transmission in the asset management system are homologous, and errors can be found in the first time and on the spot, thus greatly improving the accuracy of the fixed assets management.

3.2. Improving the efficiency of asset management
In the early days of our school, the asset allocation of colleges and universities mainly adopts manual method to carry out various kinds of registration. This method takes a lot of manpower and material resources, takes a lot of time, management efficiency is very low, management work is very cumbersome, if the staff is not responsible enough, equipment management will have serious problems. Later, we adopted the Beihua asset management system, bar code technology in 2005, bar code improved work efficiency and reduced errors, such as annual inventory work, fixed assets distributed in all departments and places of the school. According to the traditional management method, the equipment administrator must go to each site to collect and record the data, the workload is large and time-consuming, easy to make mistakes. After using bar code technology, the device administrator only needs to bring a handheld data terminal. Field data collection can be carried out, including querying equipment related information, changing the status of fixed assets. The use of departments, custodians, storage sites and other remarks information, and so on, really achieve rapid, accurate data collection to facilitate reconciliation, billing and inventory work.s

4. Some problems of barcode technology in fixed assets management

4.1. Traditional fixed assets registration can not be discarded
Although the application of bar code technology greatly improves the management of school assets, the traditional asset management still has many advantages. Many links in traditional asset management need to be signed by the recipient. Although the fixed assets management of many units has introduced the network information technology and put forward the paperless office of asset management, the author thinks that the registration of fixed assets report and fixed assets management card can not be discarded. Therefore, we should use bar code technology in combination with the actual situation of the unit, using some documents on the registration of fixed assets.

4.2. All mobilized to participate in the management of fixed assets
Fixed assets management is a very complex project in the management of colleges and universities. Asset allocation must be rationalized so that the management of the school can be effective, but asset management does not only require asset managers to manage. All teachers and students need asset management to protect the school's public assets. The management of fixed assets is a long-term and arduous work, involving a wide range, heavy workload, many problems and difficulties. Although the bar code technology has greatly improved the accuracy and efficiency of fixed assets management, no good technology can be implemented. For example, the bar code label must be affixed to the corresponding fixed assets. If the person responsible for the custody of the fixed assets discard the label casually, it will cause confusion in asset management despite the introduction of bar code technology.

Schools can make clear asset management regulations, requiring students and teachers to maintain them, and school assets need to be acted together. The school must make clear that the management of fixed assets is a matter that all staff must participate in. Every staff member must be clearly informed when receiving the fixed assets of the school that in the future, whether he is on duty, leaving or resigning, he must go through the transfer of fixed assets before leaving his original job. Therefore, in order to manage the fixed assets well, we must carry out the responsibility of keeping the fixed assets
to the people, and mobilize all to participate in the management of the fixed assets.

4.3. Introduce new technology and update management tools for fixed assets

Although the use of bar code has greatly promoted the school asset management, but asset management is still a very heavy work, so in addition to bar code technology, we can also actively introduce new management technology to improve management efficiency. Nowadays, with the development of computer information technology, we can effectively use computer technology and component computer database to register data. With the information of the network, many colleges and universities have adopted the fixed assets management system of the network version. The system is provided to users with a unified user interface, which can be accessed by many people at the same time without affecting each other. Through access control, we can sort and browse, retrieve all kinds of information and access each subsystem, and communicate and work together with others conveniently and quickly. It is also convenient for leaders at all levels to grasp the assets of the whole unit in a timely and accurate manner, and to review the purchase plans declared by each department. Because outdoor equipment is difficult to paste labels. Many furniture materials are custom-made, model specifications are difficult to describe, through the digital camera fixed assets into digital photos, through special software to guide the database. Establish asset digital picture database. Photo library for fixed assets and accessories, provide its form of query browsing. Therefore, we must constantly introduce new technology and update management means in order to manage fixed assets better and better.

5. Conclusion

Through the elaboration of this article, we also have a deeper understanding of the resource management in colleges and universities. The use of new technologies and bar codes has greatly improved the efficiency of resource management in colleges and universities. At the same time also saved a lot of manpower and material resources for teachers to reduce a lot of work pressure.

References

[1] Han Xiaohong, Chen Wenjing. Application of Bar-code and Network Technology in Asset Management of TV Equipment [J]. Modern television technology, 2005(11);118–121.
[2] Yiguo. A Brief Discussion on Improving the Information Management Level of Fixed Assets Management by Using Barcode [J]. Technology Finance and Economics, 2006(10):86–87.
[3] Bai Fuyi, Luo Xiaoling. Application of Barcode in Fixed Assets Management [J]. Research Ocean Technology, 2007(2):90-94.
[4] Yiguo. This paper discusses the use of bar code technology to improve the information management level of fixed assets management. Contemporary Managers 2006.
[5] Bai Fuyi; Luo Xiaoling barcode technology in fixed assets management application research marine technology. 2007.
[6] Pan Jicai. Analysis of two-dimensional bar code technology and application. The mall is modern. 2009.