

Exploration on Scientific Management of Computer Room Construction

Yu Zhang, Yutao Bie, Nan Liang

Public Computer Teaching and Research Center, Jilin University, Changchun, 130012, China

jluzhangyu@jlu.edu.cn

Keywords: computer room, science, management

Abstract: With the continuous development of modern computer technology, the requirements for the construction of computer room are becoming higher and higher. There are many problems in the management of traditional computer room, such as insufficient air refrigeration, confused line arrangement, insufficient power supply, how much load, and so on. Not only that, the current development of science and technology on the control of the computer room is higher. Therefore, it is necessary to strengthen the scientific management of computer room construction, and formulate the corresponding management mode of computer room in line with modern computer operation.

1. Introduction

At present, in the information age, everyone must master certain computer technology. Therefore, colleges and universities are required to carry out the "Computer Basis" course for students. At the same time, whether it is the usual curriculum requirements or future research work, are inseparable from the computer assistance. In the same building of the computer room in the school, the requirements for computer equipment have been very high. At the same time, the computer room also has potential dangers because of the cluster of computer equipment. Therefore, improving the scientific management of computer room construction is of great significance to our daily study and life.

2. Problems in Computer Room

2.1 Management of Equipment Use in Computer Room

Comparing with other laboratory equipment and instruments, the computer room has a very high frequency because of its heavy teaching task, that is, it is responsible for the basic computer courses of the whole school students. This also leads to a higher probability of failure of computer equipment. In the computer room, once there is a problem, it may lead to paralysis of all computers in the computer room, resulting in the backward progress of the whole course, which has a great impact on the teaching work. Therefore, with the continuous development of modern computer technology, we require the computer room to update teaching software and hardware facilities at any time to meet the basic requirements of teaching and ensure the orderly progress of teaching.

2.2 Working Conditions Setting in Computer Room

The working environment of computer room will directly affect the normal teaching progress, the life of computer equipment and even the safety of the computer in the computer room. If the temperature and humidity are too high, it is easy to burn the computer, too much dust, which may cause bad contact or even damage to the computer hardware equipment, and so on.

2.3 Safety guarantee of computer room

There are many electronic components in the computer room. If the management is not proper, there will be very high security risks, which will affect the normal operation and work of the whole computer room. Among them, computer security is mainly embodied in the following three aspects: first, system security. Because of the large number of computers in the computer room, if managers

are insensitive or not careful to update the system, it may lead to the computer system can not be updated in time, which may lead to the original computer vulnerabilities and Trojan Horse virus intrusion, which will all pose a great threat to the security of computer systems. In addition, some students deliberately delete and destroy the teaching software and system software in the student computer system just for the sake of not being monitored by the network control software of the teacher computer, and can operate by themselves, while others can improve the speed of the system and achieve the purpose of using the computer in the computer room. Secondly, network security. Because the computer in the computer room is controlled by the host computer, in the case of network, as long as a computer infects the virus, it may become the source of virus infection, and infect other computers in various ways, eventually leading to the paralysis of the machine in the whole computer room. Finally, physical equipment security. Mainly to prevent accidents and man-made destruction of specific physical equipment. In addition to the fire accidents caused by the aging of the lines, the theft of computer hardware should be prevented.

3. Scientific Management of Computer Room Construction

Under the background of Internet, the integration of cultural tourism industry is not only the inevitable requirement of industrial development, but also in line with the national strategy of promoting economic development and adjusting economic structure. Integration is a systematic project, which requires the coordination and cooperation of relevant departments and main bodies to jointly build a mechanism conducive to cross-border industrial integration, in which the government, market, information, talents and carriers are the most important.

In order to maximize the role of network computer room, prolong the service life of computer room equipment, and ensure the normal development of school experiments, it is necessary to strengthen the management and maintenance of network computer room. One is the management of computer managers and users, the other is the management of equipment.

1) Standardize the management system of computer room to ensure the smooth implementation of the various systems of computer room

First of all, we should pay attention to the role of managers in the maintenance of computer rooms. Require managers to have solid business knowledge and strengthen the training of computer room managers, so that they can timely find problems in hardware and software and timely and regular maintenance; at the same time, strengthen the cultivation of managers' sense of responsibility, truly become a good manager. Secondly, the management system of teaching teachers should be strictly enforced. Strengthen the cultivation of teachers' sense of responsibility, so as to actively guide students to use computers correctly in class, not to change system settings, not to use USB devices arbitrarily, not to log on illegal websites, etc., so as to reduce the rate of equipment failure damage; at the same time, strengthen the management of teachers' use of computer room teaching equipment, and do a good job in the application and registration of equipment use. Finally, we should strictly enforce the system for students. The computer room management system is built on the wall and written into the student handbook, and the students are educated before they go to the computer at the beginning of their enrollment. Students are required to operate the computer strictly in accordance with the requirements of the computer room management system. Maintain the environmental sanitation of the computer room, do not make any noise in the computer room, do not modify or destroy the parameters of the computer system at will, and do not take any accessories out of the computer room, etc.

The management and maintenance level of computer room decides whether it can play the greatest role in teaching. Therefore, in the actual teaching process, according to the requirements of students and teaching content, combined with a variety of ways, the software and hardware of the computer room should be maintained hierarchically to improve the performance of the network computer room.

2) Management of Computer Hardware Facilities

Firstly, the computer hardware facilities should be inspected and maintained regularly. Maintenance of hardware equipment, in addition to the mainframe, display, keyboard, mouse and

other peripherals, but also the maintenance of computer network hardware failures, including network card failures, network hub and router failures, network line failures. In the long-term use of computer room, regular cleaning, maintenance and maintenance are needed to prolong the life of equipment and reduce the rate of equipment damage. At the same time, a computer experiment registration system is established to record the computer faults found by students or administrators during the process of regular check-up, so that the faults can be repaired in time, so as to facilitate classification, statistics, analysis and prevention of the faults in the future.

Common hardware faults can be divided into contact faults, component faults and human faults. In the maintenance of machine room, we can use observation method, plug-in method, replacement method, etc. to check whether the connection of switches, plugs and connectors is good, then check whether the connectors in the cabinet are loose, whether the components are burnt out, and finally check whether the hardware is damaged.

Secondly, hard disk protection is also very important. Hard disk protection is divided into hardware protection and software protection, software protection such as "HD100, GHOST" tools and software, hardware protection such as hard disk protection card. Hard disk protection card supports multiple boots, a hard disk can install multiple independent operating systems at the same time, and support multiple disk protection, such as CDE disk, can protect CE disk, open D disk, any combination. When the hard disk protection card replicates in the network, it can arrange the IP address and machine name of the receiving computer on the transmitting computer according to certain rules and then transmit them remotely. It can also assign the IP address automatically. Hard disk protection card supports CMOS parameter protection, which can instantly recover data loss caused by various virus damage or human operation.

3) Inspection and Repair of Computer Software

Finally, we should pay attention to the repair and inspection of computer software system. Especially the prevention and cure of computer virus. The network makes the sharing of computer resources a reality, and also makes the sharing of viruses and other harmful information a reality. Any computer infected with viruses on the network may lead to the paralysis of the whole LAN. According to statistics, most of the network security threats come from the intranet. For the sake of computer security, the computer room should first install firewalls at the gateway, and then install necessary anti-virus software on a single computer, such as the network version of Rising, 360 security guards, anti-virus software should be updated and upgraded in time. In addition, we should strengthen the anti-virus education for students, do not browse illegal websites, and prohibit students from accessing viral USB disks into the system.

For data protection, we can use "new" protection software for data backup and system recovery. When students process data in the computer room, a lot of data are very important. If for some reasons, the computer fails and results in data loss, it will cause great losses. Schools should take active measures to prevent and cure such phenomena. Nowadays, computers purchased in batches by schools usually have new functions of network replication and data protection. It writes protection system in CMOS, which has functions of multi-system boot, network replication, automatic IP allocation and so on. Firstly, it solidifies the network replication and data protection on the motherboard, and automatically performs the network replication function on boot. Secondly, it can automatically name computers and assign IP addresses as required. Thirdly, after the replication is completed, the function of protection is added automatically. Fourth, if you need to install new software, you can open the "incremental copy" function on the server side, install the software once on the server side, the installation process of the software is saved on the server side, and then the installation process can be executed. The new function greatly reduces the labor intensity of the computer room managers and improves the work efficiency.

4) Pay attention to the hygiene of computer room

When teachers manage computer rooms, some teachers do not pay enough attention to the hygiene of computer rooms. Because the computer room is open to students freely, many students do not consciously clean personal hygiene consciousness. However, teachers have no patience to clean up the computer room anytime and anywhere. Teachers spend more time in the management

of the computer room, which tends to check the safety of the computer room and standardize students' online behavior. Therefore, many teachers and students in this situation, will produce some unsafe behavior, such as bringing water cups into the computer room, snacks and even take-out and so on. If the water is knocked down carelessly, the circuit may be burned down, resulting in computer paralysis or destruction of the entire computer room, the consequences are very serious.

Teachers who use computer rooms are not conscious of using computer rooms strictly according to management requirements. This is a human ideological problem, including students' awareness of safe and standardized operation. The main reason is insufficient propaganda and communication. Therefore, in the daily teaching tasks, teachers should repeatedly emphasize the safe operation process of the computer room to students, and teachers should also strengthen their own behavior management, to urge students to act as an example of behavior norms.

4. Conclusion

Nowadays, people rely more and more on computers, and many data processing needs computers. Computers have become an indispensable part of our daily life. In schools, the management of computer room plays a vital role in students' daily computer activities. Perfect and scientific implementation of computer room management system also brings us many conveniences. This paper puts forward some suggestions on the scientific construction of computer room, which can be used as a reference in the construction of modern computer room.

References

- [1] Tang Juqin. Management and maintenance of computer room under network environment [J]. Computer knowledge and technology, 2011, 07 (21): 5096-5097.
- [2] Chen Danwen. Talking about the management and maintenance of computer room under the network environment [J]. China's high-tech enterprises, 2007 (15): 117-118.
- [3] Liu Yubo. Construction and Management of Computer Room in Colleges and Universities under Network Environment [J]. China Science and Education Innovation Guide, 2014 (1): 164-164.
- [4] Lu Min. On the Construction and Management of Computer Room under Network Conditions [J]. Shanxi Science and Technology, 2010, 25 (5): 131-132.