

Research on the Dimension Management of Computer Lab

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Abstract—with the increase of the business which computer labs undertake, the conflicts between its use and management are increasingly acute. And it becomes an important issue to realize scientific management of laboratory. By analysis the necessity and significance of scientific management of the laboratory, we elaborated on the specific content of management and environmental equipment operation, the two contents of complementary aspects of the work. At the end we summarized the improved laboratory management areas.

Keywords- *Management; Computer; Lab; Dimension; Research (key words)*

I. INTRODUCTION

With the continuous development of information technology, computers have become indispensable education teaching tools in modern higher and there are more and more teaching business being conducted in the computer lab. Meanwhile, various large-scale examination also mostly rely on local computer lab was able to hold. Just as shown in Fig.1, All kinds of tasks led to the development of this situation is gradually borne heavy computer lab, the contradictions in the use and management of increasingly sharp and prominent, and has become a problem management had seriously. It also prompted managers must manage the computer lab into a new push to make it more scientific and efficient [1].

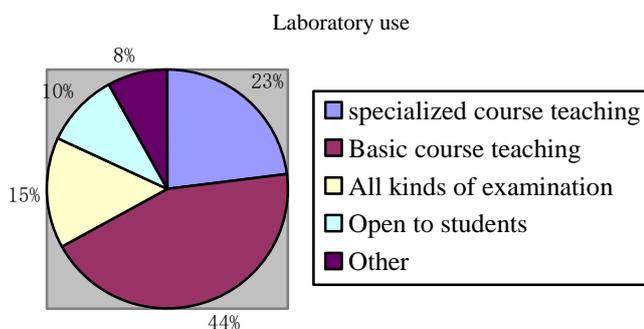


Figure 1. All kinds of lab use proportion

II. THE NECESSITY AND SIGNIFICANCE OF SCIENTIFIC MANAGEMENT

On the macro level, the overall LAN computer lab is composed of several computers and related equipment

constituted. Laboratory management not only needs to run a variety of devices to achieve stability, but also consider the efficiency of the unit to meet all business under the premise. This requirement is not only related to the effective integration and coordination of laboratory internal resources, but also on the overall adaptability laboratory raised higher requirements. From the details, there is both a software system in order to ensure the completion of the task of teaching and had to install a large number of application software to run slow as a result of conflict, more due to the impact of conflict and the use of safety equipment [2], as well as the crew of complex networks environment and reduce transmission of the virus led to contradictory software running stability. Many contradictions are all on the management of equipment and operating environment presents more detailed requirements.

Even hardware application conflicts have coordinated well, it does not mean that laboratory management work is complete. As a big place, overall comfort, good sense of service managers and other staff use should also be incorporated into the appropriate content to go into administration. Among maintain this level it relates to workplace health, computer equipment and storage software resources [3], rewards and penalties related to the use of various types of information and appropriate skills, etc., also contributed to the management of content in the ongoing work to improve.

Taking into account the above factors, management personnel only in the laboratory management more scientific, it will not only be able to ensure the completion of the current onerous types of tasks, but also to ensure the completion of these tasks more efficient.

III. THE CONTENTS OF THE COMPUTER LABORATORY SCIENTIFIC MANAGEMENT

The Management of Equipment and Operating Environment. Equipment and management mainly related to the operating environment to optimize protection, the environment and equipment systems and network security software in three aspects.

(1) *The optimization and protection of the software system.* Computer lab currently installed operating system windows xp or windows 7 based. In the main purpose of teaching, the optimization of the software system includes off unnecessary startup service, shut down the network connection by default empty, clean up registry and temp

files, install system patches and so on. At the operational level, taking into account a large number of teaching application software installation to reduce the impact on the efficiency of the software system, it must be some adjustments and corrections - for example, when installing system patches choose to install a severity rating of "high" only patches instead of all; on the computer can be used by students and teachers to use closed ICS service cannot turn off the computer and so on. All adjustments must be provided in the laboratory to be considered.

In terms of software protection system, more common method is to install the hardware protection card [4]. This approach can be a better solution to the drawbacks of the virus destroyed the software system, but still cannot suppress the spread of the virus network, requiring managers to make up and improve in other areas. In addition, it is necessary to use the GHOST software system to make a backup and even if the failure to protect the cards you can also get an initial clean operating system.

(2)*The optimization of the network environment.* Due to a computer lab in a network environment, the biggest challenge is facing the impact of computer viruses, especially the spread of ARP virus. Although you can install to protect the card quickly clear symptoms of a computer infected with the virus, but for the ARP virus, it will still continue to infect quickly to a computer. Therefore, you must install a firewall on laboratory ARP gateway to completely cut off the spread of network viruses [5].

(3)*The safety management of the equipment.* Safety equipment includes the use of both safety and property security. Since all computers are connected through power lines, cable, etc., all kinds of accidents and lightning plans reasons caused by leakage should be included in the construction plan in advance to go into the lab. In the beginning of the construction, wiring works should be considered mainly a dark line, a variety of power to use interface should be hidden easily accessible to staff positions; to purchase mine equipment, a good shielding layer; using static flooring, static electricity and lightning cut off mutual induction effect; installing grounding system, accelerate the speed of lightning into the earth, avoiding weak room lightning induced by different hazards. In terms of property, to strengthen its internal laboratory equipment inspections, increase the frequency of power testing, inspection records do to avoid human negligence equipment and internal components stolen phenomenon [6].

IV. THE IMPROVEMENT OF THE MANAGEMENT IN THE ASPECTS OF THE JOB CONTENT

The Overall Planning of the Laboratory before Construction. The establishment of the laboratory is for teaching and computer test services. Therefore, before construction must fully consider all factors. This involves procurement computer brand, hardware configuration, many aspects of the overall layout of the network topology, mine plans and so on. For example, the computer is the brand to provide the appropriate OEM version of the operating system, so you can save on the expense of legitimate copyright operating system; boards are all integrated inside the computer, so you can reduce hardware component failure due to poor contact arising

after prolonged use ; in the software system, because different teaching tasks and business use computer-based test environment for computer systems, the need to install multiple different system environments; what network topology is more suitable to avoid the spread of the virus, such as ARP. More numerous, are needed to build it at the beginning of the laboratory planned. If we consider these issues, after completion, is bound to spend more time and energy to complete.

The Health Guarantee of the Using Environment. Undoubtedly, the frequency of use of the computer lab and use are very many people, this indoor health protection is a big challenge to maintain environmental hygiene has also become an important part of laboratory management. Good environment conducive to feelings of pleasure and efficiency to ensure users. In addition to prevent the crew bringing food into the room from the source, it also can increase the appropriate use after cleaning efforts. Health task can be assigned to all classes of students on board, which will largely compensate for the shortage of managers and reduce the amount of labor.

Reserve Hardware and Software Resources in Advance. The use of computer equipment failures occur in the future, managers must be maintained in the first time, which requires sufficient hardware and software resources reserves. If it is the fault of software, may relate to reinstall the operating system or application software for teaching [7], without reserve of these programs, it cannot be repaired quickly; If it is a small part of a hardware failure can be replaced, in the hands of a corresponding component Reserves the words can be quickly replaced. Reserve in advance of hardware and software resources, and to protect the normal laboratory operations to the greatest extent, caused by the impact of the failure to a minimum.

Improve and Strictly Implement the Relevant Penalty System. Laboratory management system embodies an important guarantee for the quality and effectiveness. As a large number of passengers on board, the crew uneven quality of the place, and there is no one perfect system is impossible to strictly enforce its effective management. For computer sabotage in various situations, both may have curious reasons secretly install or uninstall software applications, it may have malicious intent on stealing computer parts replacement, there may be specialized for certain facilities damaged, we need to develop all kinds of situations, depending on the corresponding punitive measures and strictly enforced. Taking into account the development of the system lag, but also keep the details of the system perfect supplement or adjusted according to changes in the current situation. In deterrent system, it can reduce the maximum subjective destructive categories of personnel to ensure the healthy functioning of all equipment.

Raise Skill Levels and Sense of Service of the Management. Skill level management personnel and laboratory equipment whether the normal and efficient operation has a direct relationship managers understand the degree of hardware and software systems indirectly affect the efficiency and functionality of the equipment level of play [8]. Through their support and guidance, instructors and students can make up for the greatest degree of confusion because of the system are not familiar with the

operation brought on themselves, but also to help those members to participate on the examination as soon as possible to complete the task. Once the equipment failure, managers whether they have a higher level of skills will become an important factor in whether or not to protect the current task be continued as soon as possible [9]. In addition, management is also excellent sense of service personnel must possess one of the conditions, the only way they can do their utmost to provide greater assistance to the user, maximizing laboratory should have the feature to be reflected.

V. CONCLUSIONS

By many measures to improve the implementation of the above, the computer lab management is bound to a new level. Of course, the transaction is always evolving and changing, with the adjustment of external conditions and business content, laboratory management areas must also

be corrected in real time, so as to always keep their management in a very scientific level.

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