On the Construction and Management of Laboratories in Colleges and Universities

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Abstract: Using the method of literature, questionnaire, interview, investigation of Jiangxi Normal University, Xinyu University, Yichun University, Pingxiang College study found that laboratory; laboratory management is too scattered, easily lost property; laboratory construction of "small and complete" and repeat purchase, the backlog of waste; this paper puts forward to establish the administrative unit experiment center, by the unified construction with the management of the professional laboratory; the establishment of laboratory network platform, the establishment of the experimental performance evaluation. To provide reference for the construction and management of laboratories in Colleges and universities.

Preface

Since the establishment of the Cavendish Laboratory since the modern laboratory has gone through 120 years of history. The implementation of the strategy of rejuvenating the country through science and education in China after the rapid expansion of the scale, the rapid increase of the number of school; the opening rate of experiment teaching and school laboratory number, area ratio has been greatly improved; the importance of laboratory equipment has become increasingly prominent, has greatly improved; at present, colleges and universities laboratory system is basically implemented "the main mode of [1] laboratory course, belonging to the Department of laboratory management, the laboratory management system and there are a lot of problems, such as laboratory is too closed, using low [2] instruments; laboratory management is too scattered, easily lost property; laboratory construction of "small and complete" and repeat purchase, the backlog of waste [3]; the operational risk of the security problem the instrument and [4] etc.. This article through to the Jiangxi Normal University, Xinyu University, Yichun University, Pingxiang College, laboratory investigations, laboratory technician from the frontline interview Department of each department were established by their own laboratory, laboratory management and use, caused by repeated construction, are also causing problems in the experimental resources can not be shared; and as in the laboratory technical personnel team. No professional and technical personnel to laboratory management and laboratory course, resulting in the laboratory can not fully play its role and idle.

The Present Situation of the Construction and Management of the General Colleges and Universities

(One) laboratory instrument is too closed, low utilization rate of [2], many schools currently open laboratory is mainly used for the class of some experimental textbooks, and not open to the students' extracurricular time, the main reason for the problem of resources, open laboratory too much, old instruments, material consumption, experimental personnel allowance; so some local colleges and universities has been reluctant to open laboratory. The materials on the experiment are basically some principle experiment, it is to let students master the textbook knowledge, and no transition to let the students design experiment, develop thinking, and make the students lose the enthusiasm of the experimental class, the laboratory utilization is more and more low.

(Two) the laboratory management is too scattered, easily lost property; laboratory construction of "small and complete" and repeat purchase, the backlog of waste [3] phenomenon, at present a lot of school laboratories are using a "two college" management mode, the three aspects of the overall resources of the school of human and financial resources are divided the research, by each
department according to the characteristics of their own professional build their own laboratory, often resulting in low level repeated construction of basic laboratory management, also dispersed property, also easy to lose, but also caused a considerable amount of idle assets, the waste of resources. The problem is that the school laboratory can not be unified management, can not optimize resources,

(Three) college laboratory safety problems and equipment operation risk assessment [4], in two aspects of hardware and software. The hardware is the laboratory equipment obsolete, the aging line, ventilation equipment, fire equipment in safety equipment is obsolete; the software reflects the lack of safety awareness among teachers and students, teachers and students as well as careless do not pay attention to air circulation, do not pay attention to the management of toxic and harmful drug and waste liquid and waste; management system, system of laboratory safety responsibility is not perfect, not to implement the laboratory. The laboratory director or laboratory technician is responsible for the safe custody of the laboratory water and electricity and dangerous chemicals. Responsibility in place.

(Four) pay attention to and strengthen the construction of laboratory team of professional and technical personnel, to send out, please come in the way of [5], increase the existing lab personnel training and education, introducing professional laboratory technology. The many schools are not professional researchers and other non professional turned, the degree is relatively low; school teachers are not included in the unified management, do not pay enough attention to them, there is no performance requirements. This makes the laboratory management level is not high. As a result, the researchers should be allowed to study in the first-class universities as far as possible to improve their business level.

Jiangxi Ordinary University Laboratory Problems

The visit to the Jiangxi Normal University, Xinyu University, Yichun University, Pingxiang College, the four schools in some of the laboratory, with the 82 investigators conducted a survey interview. The results are as follows:

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Laboratory Technician</th>
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<tr>
<td>Low opening rate</td>
<td>Hidden danger</td>
</tr>
<tr>
<td>71 person</td>
<td>58 person</td>
</tr>
<tr>
<td>86%</td>
<td>70%</td>
</tr>
</tbody>
</table>

From the table shows that there are fundamental problems in the laboratory of Jiangxi ordinary universities, such as laboratory opening rate is low, safety problems, loose management and other issues, the technician's technical level, wages to be improved.

Improve the Existing Problems in the Laboratory Countermeasures

Based on the results of the survey, we put forward the following problems and solutions:

(One) the current system of university laboratory management system needs to be improved; proposed the establishment of administrative units experiment center, from the center of the unified management of all the school laboratory, and according to each department, the Department of teaching and research needs to arrange the laboratory courses and deployment of the medicine equipment, which helps to solve the decentralized management, repeat purchase the backlog of waste, the phenomenon of school resources integration fundamentally, human, financial and material resources unified management.

(Two) the level of laboratory management and methods need to be improved, recommended the establishment of laboratory network integrated service platform, which is conducive to the management of experimental teaching, experimental team management, equipment management, material supply management, laboratory experiment of performance management work towards
software; avoid many drawbacks of the traditional laboratory management mode, such as repeat purchase, instrument management, easily lost instrument; laboratory network platform for experimental management to standardization, standardization, scientific and information technology.

(Three) the current college laboratory use rate is low; open laboratory teaching suggestions, from the open time, open from the staff, open from the experiment content, in the school teaching and scientific research basis, as far as possible opened some innovative and comprehensive experiments for the students, to mobilize the enthusiasm of the students. Students' curiosity and creative spirit; and the conditions of the laboratory should be open to companies and enterprises, fully tap the resources of the laboratory quality benefit, regional economic development level of scientific research and contribution, in laboratory for income;

(Four) the establishment of the laboratory performance evaluation, mainly through quantity, undertake all kinds of scientific research projects for scientific research fund, published the results obtained the influence factors, incentives and other aspects to reflect the performance of the laboratory construction project, this is the best way for the most direct evaluation of the effectiveness of the status quo, the construction of the school laboratory. Laboratory professional and technical personnel business level, management level of regular inspection, the experimental technical personnel business level and salary.

Summary

The laboratory is the heart of modern universities "[6], is one of the important factors to evaluate the university scientific research level; the establishment of the administrative unit control laboratory center, unified management of the laboratory, a laboratory network platform, standardization, scientific, residence development, open interest and management of laboratory; the establishment of the laboratory performance evaluation. Help to improve the laboratory technician level of business and scientific research ability.

Reference

[1] Feng Duan laboratory is the heart of modern university [J]. Laboratory Research and Exploration 2000, 19 (5).


[6] Feng Duan laboratory is the heart of modern university [J]. Laboratory Research and Exploration 2000, 19 (5).