

# **The Reform and Exploration of the Electrical and Electronics Laboratory in Higher Vocational Colleges**

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**key words** Higher Vocational College; Electrical and Electronic; Laboratory Reform

**Abstract** The establishment of electronic and electrical laboratories in higher vocational colleges is mainly to promote the development of electronic and electrical major teaching, but also to improve the quality and efficiency of electronic and electrical machinery teaching. However, at this stage, there are still many problems in the construction of electronic and electrical laboratories in higher vocational colleges. In order to improve the present situation of electronic and electrical laboratory construction, this paper mainly focuses on the reform of electronic and electrical laboratories in higher vocational colleges.

## **1. Introduction**

Students in higher vocational colleges want to improve their professional ability and practical operation ability, mainly through the laboratory, the practical ability of middle school students in the electronic and electrical laboratory can be greatly improved, so the learning efficiency of students will also be enhanced. The teaching effect and teaching quality of electronic and electrical specialty are closely related to whether the laboratory equipment is perfect or not. In order to reform the teaching mode of electronic and electrical specialty in higher vocational education, we should first strengthen the construction of laboratory, through which students can transform the theoretical knowledge into practical ability, and obtain the consolidation of theoretical knowledge.

## **2. Problems existing in the Reform of Electrical and Electronic Laboratories in higher Vocational Colleges**

### **2.1 The management system has not been strictly implemented**

At present, higher vocational schools begin to manage electronic and electrical laboratories, but this does not mean that higher vocational colleges attach enough importance to the management of electronic and electrical laboratories. At present, the management of electronic and electrical laboratory is still in the stage of formalism. The so-called formalism is that although a clear laboratory management system has been posted, it has not implemented the laboratory management system in place. However, some laboratory higher vocational students can strengthen their practical operation ability, and the practical operation ability is the employment advantage of higher vocational students, which is different from other forms of education. Only by improving students' practical operation ability can we improve their practical operation ability. Students' employment competitiveness, and in order to improve students' time operation ability, we must improve the laboratory management system and improve the effectiveness of practical teaching links. In addition, it should also be combined with laboratory construction and management to make laboratory management more standardized.

### **2.2 The shortage of experimental teachers**

The laboratory management of many higher vocational colleges is shouldered by the teachers majoring in electronics and electronics. Therefore, the laboratory management of higher vocational colleges is very irregular, and even the equipment loss is not repaired in time, if it is the case of equipment loss. Although a small number of higher vocational colleges have full-time managers, these laboratory managers also shoulder other management work, which also causes these laboratory managers to work very busy and unable to concentrate on laboratory management.

**2.3 The facilities are backward and the contents of the experiment are old.**

In order to improve students' interest in the experiment, it is necessary to improve the quality and interest of practical teaching, so that students can correct their learning attitude and understand the importance of practical teaching. In the process of participating in practical teaching, students' practical ability can also be effectively improved. when students get a sense of achievement in practical teaching, students will naturally be interested in practical teaching. And in the practice link can also strengthen the grasp of theoretical knowledge, the theoretical knowledge can be effectively transformed into practical ability. However, because the enrollment scale of higher vocational colleges is expanding in recent years, colleges and universities must invest more funds. And in order to save the cost as much as possible, in order to save the cost as much as possible, the colleges and universities are difficult to achieve timely updating for the old practical training equipment, so that the students are difficult to master the most advanced technology, and the demand of the society for the electronic and electric professionals is difficult to reach.

**2.4 The teaching goal of practical training is not clear**

Many teachers are directly involved in the practical training class, and guide the students to carry out practical training, but the way is not to strengthen the students' grasp of the practical training content, but also can not improve the students' self-learning ability, and only make the students more dependent on the teachers, Therefore, the teacher should give the students more control right, let the students lead their own way of study, and also let the students strengthen the master of the practical training goal. The teacher needs to be able to guide the students so that the students can improve themselves correctly and effectively, and the teachers should further understand the practical training contents, and on the basis of the sufficient understanding of the practical training content, the students should be taught.

**3. Reform and Exploration of Electrical and Electronic Laboratory in higher Vocational Colleges**

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Strictly implement the laboratory management system	Improve the level of laboratory teachers	Increase the investment of laboratory construction funds	Open laboratory management and maintenance, convenient for students.

**3.1 strict implementation of the laboratory management system**

In order to ensure the smooth development of the training room, then first of all, we should improve the training room management system, only after perfecting the training room management system, can we better meet the training needs. At the same time, it is necessary to make clear the rules and regulations of training room management, both teachers and students should abide by the rules and regulations and maintain laboratory safety. In the process of implementing laboratory management rules and regulations, the rules and regulations should also be adjusted according to the actual situation. When making rules and regulations, we should also listen to the suggestions of teachers and students and adopt reasonable suggestions.

**3.2 upgrading of the laboratory teaching staff**

In the process of recruiting laboratory personnel, the requirements of laboratory personnel should be

clearly defined, and appropriate laboratory personnel shall be selected according to certain standards. At the same time, because the laboratory management work is a professional work, the management personnel should also have relevant professional knowledge. The school should make the best of the professional knowledge and have a strong sense of responsibility. After admission to the management, the university should also train the management personnel to ensure that the management personnel can better carry out the laboratory management.

### **3.3 increase investment in laboratory construction**

If colleges and universities want to build electronic and electrical laboratories, they should first invest a lot of money, and with the development of society, the requirements of laboratory construction are also improving. However, at this stage, higher vocational colleges are still facing very great financial pressure, so higher vocational colleges can also seek the cooperation of enterprises and build laboratories with enterprises, in which enterprises can also get the protection of human resources.

### **3.4 Management and maintenance of open laboratories for easy use by students**

Generally speaking, the laboratory is managed by a special laboratory administrator, so students can only use the laboratory when there are practical courses, but this reduces the frequency of laboratory use and also affects the study of students. Therefore, colleges and universities should open up laboratory management and improve the frequency of laboratory use.

## **4. Conclusion:**

To sum up, the construction of the electronic electric professional laboratory is not only to improve the professional skill level of the students, but also to promote the development of the teaching in higher vocational colleges. In addition, strengthening the construction of the electronic and electrical professional laboratory can also effectively help the students to solve the problems encountered in the study, and also can promote the students to become the required electronic and electric professionals in the society.

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