

# Construction and Analysis of the Practical Teaching System of Engineering Cost Major in Colleges and Universities

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**Abstract:** The construction of the practical teaching system of university engineering cost major is the key link to train high-quality engineering cost talents. This paper analyzes the current situation and existing problems of practical teaching in engineering cost major, and discusses the methods and paths of building an efficient, systematic and practical teaching system. First of all, the introduction section introduces the background and significance of the engineering cost major, and summarizes the research purpose and content of this paper. Then, this paper analyzes and discusses from the aspects of curriculum setting, practice link, teaching staff and teaching methods, and puts forward a series of measures to improve and perfect it. Finally, the conclusion section summarizes the main points of this paper and prospects the future developments.

**Keywords:** Engineering cost major; Practical teaching; Teaching system; University; Education reform

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## 1. Introduction

Engineering cost major is one of the important disciplines to cultivate professional talents with the ability of engineering project cost evaluation and control. With the continuous development of social economy and the increasing number of construction projects, the demand for project cost talents is also increasing. However, there are some problems in the practical teaching of engineering cost major in colleges and universities, such as the insufficient practical links and the unreasonable structure of teachers, which restrict the quality of professional education and the improvement of students' comprehensive quality. Therefore, building an efficient, systematic and practical teaching system is an urgent problem to be solved.

## 2. Analysis of the Practical Teaching Status quo of Engineering Cost Major in Colleges and Universities

The practical teaching of engineering cost major is the key link of cultivating high-quality engineering cost talents. Through the analysis of the current situation of practical teaching, we can find some problems and challenges, including curriculum setting, practice links, teachers and teaching methods<sup>[1]</sup>.

### 2.1 Curriculum Setting

The curriculum of engineering cost major should give consideration to the combination of theory and practice. However, in some colleges and universities, the practical curriculum is insufficient and more favors theoretical courses. This leads to a lack of cultivation of students' abilities in practical operation and project practice to adapt to the increasingly complex engineering project management needs.

### 2.2 Practical Link

Practice link is an important part of the engineering cost professional teaching. However, in some universities, the design and organization of practice are not perfect. The selection and setting of practical projects have certain limitations and lack of close integration with actual engineering projects. In addition, the guidance and evaluation methods of practice links also need to be further improved to ensure that students can really obtain the improvement of practical ability and the accumulation of practical experience.

### 2.3 Teaching Staff

Teaching staff is an important guarantee of practical teaching quality. However, at present, the teaching staff structure of engineering cost majors in some universities is unreasonable, and the teachers lack practical experience and industry background. As a result, teachers fail to provide real and practical cases and guidance in the process of practical teaching, which limits the cultivation of students' practical ability<sup>[2]</sup>.

## **2.4 Teaching Methods**

The innovation and application of teaching means are crucial to improving the effect of practical teaching. However, some college engineering cost majors still rely too much on traditional teaching methods, such as classroom teaching and written reporting. This single teaching method cannot meet the students' diverse learning needs and the cultivation of practical ability, so more modern educational technology and interactive teaching methods need to be introduced<sup>[3]</sup>.

## **3. The Method and Path of Constructing the Efficient Practice Teaching System of Engineering Cost**

### **3.1 Optimize the Curriculum Setting**

Optimizing the curriculum setting is an important step in constructing an efficient practical teaching system. First of all, the proportion of theoretical courses and practical courses should be adjusted and improved in combination with the characteristics of the engineering cost major. Add practical courses, such as field investigation, engineering survey, engineering cost software application, etc., to ensure that students can truly contact and apply practical knowledge in the course. Secondly, the connection mechanism between courses should be established, so that different courses can be organically linked to form a complete knowledge system. In addition, interdisciplinary courses, such as project management, laws and regulations, can be introduced to cultivate students' comprehensive ability<sup>[4]</sup>.

### **3.2 Expand the Practical Links**

Broadening the practical links is the key to improve the quality of practical teaching. On the one hand, we can strengthen the cooperation with the actual engineering projects, establish a school-enterprise cooperation base or laboratory, and provide students with real practical engineering project opportunities. By participating in the process of actual projects, students are able to gain practical experience and problem-solving skills. On the other hand, simulation practice links can be set up, and virtual simulation technology or practical cases can be used to let students make practical operations and decisions in the simulation environment, so as to improve their practical ability and problem solving ability.

### **3.3 Improve the Quality of the Teaching Staff**

Improving the quality of the teaching staff is crucial to practical teaching. On the one hand, professional training and academic research can be strengthened, and teachers can be encouraged to participate in industry practice and project management in order to increase their practical experience. On the other hand, industry professionals or engineering cost practice experts can be introduced as part-time teachers or visiting professors to provide students with practical cases and industry insight. In addition, a tutorial system can be established to provide personalized guidance and guidance to help them grow in practice<sup>[5]</sup>.

## **4. Measures to Improve and Perfect the Practical Teaching System of Engineering Cost Major in Colleges and Universities**

To improve and perfect the practical teaching of engineering cost major, we need to open practical courses, strengthen the organization and management of practical links, strengthen the training and introduction of teachers, and promote and apply modern educational technology. The implementation of these measures requires the joint efforts of the university education management departments and teachers to establish an effective mechanism and system. Through these improvement and improvement measures, we will be able to improve the quality and effect of the practice teaching of the engineering cost major, and lay a solid foundation for cultivating high-quality engineering cost talents to meet the needs of the society<sup>[6]</sup>.

### **4.1 Strengthen the Organization and Management of Practical Links**

Practice link is an important part of the practice teaching of engineering cost major. In order to better organize and manage practice links, school-enterprise cooperation bases or laboratories can be established to cooperate with industrial enterprises to carry out practical projects. This will not only provide students with the opportunity to participate in practical engineering projects, but also make teaching and practice more close to practical needs. In addition, it is necessary to strengthen the guidance and evaluation of practice links to ensure that students can really learn knowledge and gain experience in practice.

### **4.2 Strengthen the Training and Introduction of Teachers**

Improving the quality of the teaching staff is the key to practical teaching. Colleges and universities should strengthen the training and introduction of teachers majoring in engineering cost. For on-job teachers, opportunities for further study and training should be

provided to continuously improve their practical ability and teaching level. At the same time, professionals with practical experience in engineering cost can be recruited as part-time teachers or visiting professors to provide students with practical cases and industry insights. By introducing and cultivating excellent teachers, we can provide better practical guidance and teaching support.

### 4.3 Promoting and Applying Modern Educational Technology

The promotion and application of modern educational technology are very important to improve the effect of practical teaching. Teachers can use multimedia technology to show practical engineering cases, and let students have a deep understanding of the practice process and technology application through images, videos and other forms. In addition, information technology tools and online learning platforms can be used to provide online simulation and real-time feedback of practical projects, so that students can conduct practical operations and communication anytime and anywhere. Through the promotion and application of modern educational technology, students' participation and learning interest can be increased, and their practical ability can be promoted.

## 5. Conclusion

In short, through the analysis and discussion of the construction of the university engineering cost professional practice teaching system, this paper puts forward a series of improvement and improvement measures. These measures include optimizing the curriculum setting, broadening the practical links, improving the quality of the teaching staff and innovating the teaching methods. These improvement measures are helpful to improve the quality of practical teaching of engineering cost major and the comprehensive quality of students, and to cultivate high-quality engineering cost talents to meet the needs of social development. However, the implementation of these measures requires the joint efforts of the university education management departments and teachers to form a good teaching atmosphere and mechanism. In the future, we can further deepen the research, combine with the actual situation, and constantly improve the practical teaching system of engineering cost major, so as to make greater contribution to the development of engineering cost education in China.

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