

# Analysis of the Application of Role-playing Method in the Teaching of Whole-process Cost Management Specialty in Higher Vocational Education

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## Abstract

With the improvement and continuous deepening of the socialist market economic system, the pace of reform in the field of engineering cost is also accelerating, and it is objectively required that construction projects should be managed throughout the entire process. The whole process control of construction project cost is the main form of project cost management. It is not an easy task to guide students majoring in engineering cost into their job roles. Preliminary work allows students to master the relevant basic knowledge. In the mid-term work, let students learn to compile the bill of quantities for bidding and control the price of bidding. In the later work, the bidding price, cost price, progress payment, settlement price, etc. are introduced to guide students majoring in engineering cost into their job roles. This paper analyzes the current state of the whole process cost management scheme design and curriculum of engineering cost major in higher vocational schools, combines the characteristics of students and curriculum majors, introduces role-playing into curriculum teaching, and studies the necessity of applying role-playing method in curriculum and its implementation in curriculum teaching. Through the method of role-playing, the students devote themselves to the learning, from the passive role waiting to be accepted to the active role of active participation.

## Keywords

Role-playing method; Whole process; Cost management; Higher vocational.

## 1. Introduction

The role-playing teaching method is a situational simulation teaching method with students as the center and teaching interaction. According to the positions that graduates may hold in actual work, combined with the job requirements and the responsibilities and positions of the positions, students are arranged in simulated and realistic jobs. In the environment, they are required to deal with various problems that may arise, and use a variety of methods to evaluate and improve their psychological quality and potential ability [1]. This paper starts from the analysis of the positive significance of the role-playing method, discusses the application of the method in the teaching of the whole process of cost management in higher vocational colleges, and designs the implementation plan of the role-playing teaching method through the simulation training at each stage.

## 2. Current Status of Teaching

At present, according to the "Implementation Opinions on Accelerating the Reform and Development of the Construction Industry", Wenzhou Housing and Urban-Rural Development Bureau has carried out the implementation of the whole-process engineering consultation pilot work in 2018, and actively guides construction units to take the whole-process engineering consultation as a priority. Project construction organization and management. In recent years,

the talent training program for the engineering cost major of the Department of Architectural Engineering of Wenzhou Vocational and Technical College, on the one hand, continued to develop basic teaching, combined with the traditional talent needs of the industry and the requirements of social research, on the other hand, it has been keeping up with the development trend of the industry, adding a series of new courses. These all reflect the emphasis my major has placed on the construction of innovative, compound and applied talent training courses, as well as the strengthening of the deep integration of modern information technology and education and teaching. Of course, the transformation of the model also puts forward higher requirements for teachers' professional level - while mastering solid theoretical knowledge, they should also have the ability to keep pace with the times and innovate and develop.

Whether it is from the examination requirements of cost engineers, from the perspective of ability training, or from the perspective of market employment, the quality of classroom teaching of the whole process of cost management is of great significance to the students majoring in engineering cost in higher vocational colleges [2]. In the process of practice, each department and each person should shoulder the corresponding responsibilities to ensure the smooth development and implementation of the work. However, students majoring in cost often think that they have mastered the actual drawing and computing ability of engineering measurement and pricing due to their confidence in the knowledge of the previous courses. They only focus on budget skills and often ignore the interaction between various roles in the implementation of engineering projects. It is difficult to combine the knowledge learned with the contents of survey, design, construction and supervision, and it is impossible to communicate effectively with other project participants in practice.

It can be seen that the role-playing method aims to promote ability, cultivate students' professional ability, strengthen students' communication and cooperation, and can truly realize the teaching mode of "student-centered, teacher-led". The whole process of cost management involves the project decision-making stage, the design stage, the bidding stage, the construction stage and the completion acceptance stage, as well as different parties in these five stages. Therefore, the teacher selects the teaching content in the teaching process and adopts the role-playing method to implement the teaching. Plan, do a good job of group work as much as possible, simulate the real situation, enhance the interaction of all parties, and guide all students to actively participate in it [3].

### 3. Teaching Objectives

First of all, we should follow the teaching concept of higher vocational education "student-themed, employment-oriented, ability-oriented, and the goal of promoting students' sustainable development", according to the specific professional talent training plan, combined with the content of this course, to change the traditional indoctrination and cramming. According to the different types of enterprise units involved in cost management at each stage, students are arranged to play different roles and consider issues from their own standpoints. Both parties conduct reasonable negotiation on scene design. After reaching an agreement, imitate the actual text to sign, and finally the teacher Summarize and summarize to achieve the ultimate goal of improving the teaching effect, and help students improve their abilities in the following areas.

#### 3.1. Cognitive Job Role

At present, it is well known that engineering cost professionals are in great demand, with a wide range of employment and many employment opportunities. All engineering projects require cost personnel to participate in the whole process from start to completion. Cost personnel are required for the start-up budget, project progress allocation and project completion settlement

work. The consulting cost center of the owner, construction unit, and notary must also have its own cost personnel [4]. However, for students, they are not very clear about their own job positioning. Although they will make a part of the budget, they still do not understand the operation of project cost management in the social system. By setting up role-playing links in the course, students can accurately understand the tasks performed by the staff of various enterprise departments in the engineering project, and in the future employment links can they have more clear and detailed goals and implementation directions. Make job choices that are more suitable for you, and avoid frequent job-hopping due to unclear job recognition. In this way, it is possible to make breakthroughs and development in the fixed cost industry in the fastest time after graduation.

### **3.2. Familiarity with Industry Texts**

In the early courses, it may only involve the preparation of budget books, but this is only a category of various industry texts in the cost industry. With the management of different stages, more and more various texts will be involved, such as the decision-making design stage of general projects. Feasibility study reports, investment estimates, design estimates; list bidding control prices and bidding documents for general individual projects in the bidding stage; project progress payment, engineering change claim visa price adjustment in the construction stage; settlement and final accounts reports in the completion acceptance stage. [4, 5] These contents are essential in the actual implementation of engineering construction projects. Through the exchange of roles, all students can have the same opportunity to contact all the industry texts that need to be learned, which enhances students' professional ability and ability to process text and data, restores the real work scene for students as soon as possible, and prepares for future students. Faster and better integration into the work environment to make the best preparation.

### **3.3. Master the Standard Technology**

The content involves the execution period and the execution specification. In reality, both parties A and B about the project will consider the interest relationship from their respective positions, and adopt certain skills to win greater interests [6]. By creating a real working environment and using simulation teaching, students are task-driven to role-play, and solve practical problems through analysis, thinking, and discussion on both sides. Since the cases mainly come from the actual work content of the enterprise, from the shallower to the deeper, students have sufficient time to digest and absorb, improve students' hands-on skills, and guide and standardize the use of various operating requirements and tools. Doing so not only gives students a sense of achievement, but also meets the teaching requirements of "zero distance" employment.

## **4. Implementation Method and Process**

Taking the course "Engineering Cost Management" as an example, role-playing method is purposefully introduced in the teaching process of the whole semester, especially in the learning process of entering the total cost of each project, 2-3 weeks before the start of the semester. During the time, the content of the course is still mainly based on basic knowledge, which aims to pave the way for the development of subsequent detailed stages. It is necessary to describe the main functions of the units involved in each future stage and the functional significance of documents, and frequently use small cases to enable students to learn. Understand the basic application of text through the switching of various roles. At the same time, strengthening students' understanding and memory of basic cost calculation is also a prerequisite for the completion of subsequent stage tasks. Taking the time of the project as the main axis, grouping is adopted, and the classroom is rearranged into a group discussion form,

which is more conducive to students' free discussion and communication [7, 8]. Create a relaxed atmosphere, so that students like to talk, fall in love with hands, and no longer feel restrained. As the main guide, teachers should also do a good job of summarizing and sorting out in it, strengthen encouragement, and improve the overall students' initiative and enthusiasm for learning. At the same time, it also enhances the initiative and self-confidence of some students who were originally shy.

#### **4.1. Preparation Stage: Case Selection, Role Positioning**

Taking the construction agency's entrusted bidding as an example, the teacher pre-selects engineering cases and assigns tasks, asks students to simulate the bidding process in groups, and conduct preparations such as data collection within the specified time, and then the students play the role of "construction party" and "bidding party". Agent, "bidding company personnel", and complete the work tasks of their respective positions. After students accept the task, they should divide the roles according to the needs of the project. The main roles are: "constructor", "bidding agent", "bidder", "notary public", "bid evaluation expert" and "supervision department representative". Relevant personnel should have a certain understanding of the project case in advance, be familiar with the functions of all parties, and do a good job in the preliminary preparations. Due to the large number of roles involved, rehearsal can be carried out in advance. The "constructor" should be familiar with the relevant conditions of the project and prepare for the winning bidder to determine and sign the contract. The "bidding agent" shall organize relevant personnel to conduct bidding filing, prepare bidding documents, issue bidding announcements or invitation letters, conduct qualification examination of bidders, issue bidding documents, organize site surveys, and answer questions about projects. The "Bidder" shall prepare the bidding documents according to the requirements of the bidding documents, seal them as required, and deliver them to the place designated by the bidding unit on time. "Notaries" should be impartial according to requirements and corresponding etiquette. Select "bid evaluation experts" according to the process, and form a bid evaluation committee with relevant personnel. Secondly, the role-playing team should prepare corresponding auxiliary props, equipment and documents according to the different roles played. For example, the "bidding agent" needs to prepare multimedia equipment, bidding documents, bidding announcement or invitation letter, bottom bid, bidding qualification examination form, bidding Books, sign-in forms for bid opening meetings, bid evaluation methods, expert evaluation forms, bid evaluation reports, bid winning notices, construction contracts, and the corresponding materials are summarized and bound into volumes.

#### **4.2. Implementation Stage: Simulated Scene, Real Drill**

The "bidding agency" organizes relevant personnel to simulate the procedures of "bid opening", "bid evaluation" and "bid determination" in the integrated classroom of teaching and practice. Before the "bid opening", the "bidder" submits the bid, signs in, and attends the bid opening meeting. The bid opening meeting is presided over by the relevant personnel of the "bidding agent", and the assistants organize relevant units to check the sealing of the bidding documents. The bid opening process shall be recorded and archived for future reference. After that, the "Bid Evaluation Committee" will evaluate the bids individually, determine the winning candidates, recommend them to the construction unit and fill in the bid evaluation report[8]. Finally, the "construction unit" signs a construction contract with the winning bidder as required. During the implementation process, the instructor can act as a representative of the construction party or a notary, a higher-level competent department or a supervisory department to impartially, summarize and evaluate the bidding process or raise questions.

### **4.3. Evaluation: Questions and Comments, Summary and Conclusion**

After the role-playing is completed, teachers and students will make comments to evaluate whether the "bidding" process conforms to the normative requirements, etc., and give points. Instructors can ask professional questions according to the development of the plot.

## **5. Results and Discussion**

### **5.1. The Quality of Classroom Teaching Has Been Effectively Improved**

The theoretical knowledge taught in the classroom is always difficult for students to combine with the application in practical operation, so it seems boring. Appropriately introduce role-playing methods in different cost management stages, so that students can complete the learning content in "personal experience", clearly feel that knowledge is power, master certain professional skills and communication, interaction and negotiation skills, thereby significantly improving In order to learn enthusiasm, and then to achieve the ultimate teaching purpose.

### **5.2. Emotional Communication Between Teachers and Students Has Been Rapidly Improved**

In the engineering cost professional curriculum system, some courses have the characteristics of cumbersome knowledge points, difficult to remember and easy to forget. The traditional classroom teaching mode tends to make students feel bored and even criticize the teachers. The role-playing method promotes the exchange of roles between teachers and students, students prepare after class, students speak, students ask, students answer, and teachers comment in class. There is no fixed answer. Everyone is a questioner, and everyone is an answerer. It enhances the subject consciousness of students and narrows the distance between teachers and students. At the same time, the hard work of the students in the process of preparing lessons has also allowed the students of the lecture team to truly understand the connotation of "one minute on stage, ten years of work off stage", appreciate the hard work of teachers, and enhance emotional communication between teachers and students.

### **5.3. The Teaching Level of Teachers Has Been Greatly Improved**

The process of teaching is always a process of interaction between teachers and students, and good interaction will bring about a win-win situation. The use of role-playing method not only brings a relaxed and lively atmosphere to the classroom, improves the quality of teaching, but also promotes the growth of teachers. Constantly exploring on the road of classroom teaching innovation and reform, teachers need to use their own knowledge, ability and experience to discover new ways to try from time to time, so as to enrich their teaching methods, so that the same teaching content can be reflected in the new implementation plan. Charm, from urging students to learn passively to attracting students to learn actively, makes teaching work more enjoyable.

## **6. Conclusion**

The learning process of role-playing is a practical activity that everyone participates in, and it is important that everyone completes the process together. Its method has been widely used in the daily teaching of schools and various types of corporate training. The flexible participation form and intuitive teaching method have been welcomed and recognized by more and more teachers and students. Through role-playing, the complex content can be simplified and the boring content interesting, so that the dislike of learning becomes the love of learning, and the students' enthusiasm for learning and inner drive can be stimulated. In the process of learning, I feel the infinite mystery and endless fun of exploring knowledge, feel the agility of wisdom and the tension of life, and enjoy the joy of learning and progress. progress.

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