

Practical Teaching Research of Engineering Management Specialty Based on Application-Oriented Talent Training

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Abstract

According to the practical teaching objectives of engineering management major in the college of civil engineering, in order to cultivate the market demand for application-oriented undergraduate talents, this paper comprehensively expounds the organization and implementation process of the field practice of engineering management major, summarizes and analyzes the innovation points of practical teaching links and the main existing problems, and puts forward some Suggestions to ensure the quality of practical teaching and the evaluation of specific effects. This paper makes a beneficial exploration and practice on the field practice teaching mode based on the training of applied talents in engineering management.

Keywords

Engineering management major, applied talents, teaching objectives, field practice, practical teaching.

1. Introduction

Field management practice is an important practical teaching link of engineering management specialty and an important process for college students to combine their theoretical knowledge with field practice. In the practice site, students participate in the management of technical quality as professional supervision engineer or assistant of cost engineer, acquire the direct knowledge and professional skills related to civil engineering, consolidate the theory learned in class, and complete the tasks assigned by the field engineer or technical quality manager. The aim is to develop and exercise the practical management ability to analyze engineering problems independently and to help propose solutions, so as to improve the professional knowledge and practical work ability of engineering management, so as to meet the needs of the employer for the professional knowledge structure of college students under the market economy.

In the process of field practice, the organizational form and management mode of the relevant units of engineering project management are necessary windows for students to understand the society. By participating in the construction process, students can also deepen their perceptual understanding of civil engineering construction. At the same time, the serious responsibility of the technical personnel on the construction site, the professional literacy of the cost managers and the management concept of the project manager will also play a good role in establishing a correct attitude towards life and learning for the students participating in the practice. This is helpful to cultivate students hard-working spirit in the process of work, enhance their dedication and sense of responsibility; not only that, in the process of business contact with all relevant units, it can also exercise students adaptability to society, improve their organizational and management ability, social ability and on-the-spot adaptability.

Therefore, for the students majoring in engineering management in civil engineering college, through the teaching link of field practice, it will play a good role in cultivating excellent quality, correcting working attitude and strengthening engineering practice ability, and finally achieve the teaching goal of improving students comprehensive quality to become applied talents.

2. The process and steps of practical teaching in engineering management specialty.

The field practice of engineering management specialty is organized according to the requirements of teaching plan and syllabus.

(1) To set up an internship team. The internship team is composed of managers and interns, and the managers of the internship team are generally composed of an intern captain and several mentors, in which the intern captain is composed of teachers with rich theoretical knowledge and field experience, and the guidance teachers should be selected and assigned young teachers with their own specialty. The members of the internship team are composed of junior students majoring in engineering management, because for the junior students, they have already studied the main professional courses and have a certain theoretical knowledge reserve for the field practice that will begin soon. The teacher-student ratio of the internship team is generally the best at 1:6.

(2) Contact the internship site. Before the field practice, the internship captain should fully understand the situation of the students in this major, carry on the detailed statistics and analysis to the units which are beneficial to the students to carry out the practical activities, finally determine the practice emphasis aiming at strengthening the management ability of the construction site, and complete the preliminary work such as the pre-contact determination of the practice place and the budget of the practice funds.

(3) To compile the practice instruction book. According to the requirements of the practical syllabus and the requirements of the practice site, the practice instructions for the field management of engineering management specialty are compiled by the practice managers, and the organization, planning and implementation of the practice are described in detail, so as to lay a good foundation for the smooth progress of the practice.

(4) To convene a general meeting of practice mobilization. According to the requirements of the practice instruction, before formally entering the construction site, the field management practice mobilization meeting shall be held, and the practice objectives, main contents, organization arrangements and practice requirements shall be introduced by the practice captain, and special emphasis should be placed on the matters needing attention in the practice.

(5) To enter the internship site. According to the requirements of the group in the practice guidance document, under the arrangement of the internship captain, the students of the practice team will be led by the guidance teachers to enter the practice site in the form of a group, and during the practice period, they will always supervise and manage the practice with the students as a post internship. During the practice period, the daily work must be carried out according to the work and rest time of the internship unit.

(6) Summary and report of practice. After the end of the field management practice for a period of four weeks, according to the nature of the internship unit, the specific situation of the practice project and the practice diary, the practice report should be written according to the requirements of the practice instruction book, and the PPT, practice report and defense should be compiled according to the contents of the practice report.

3. Analysis of the key points of practical teaching in engineering management specialty.

(1) Should combine the content of the field practice, appoint the on-the-spot instruction teacher. According to the characteristics of the field practice of engineering management specialty, each practice unit should be commissioned to appoint the field guidance teacher according to the requirements of the practice content in the course of practice. The requirements for field guidance teachers should be engineers or above, in order to ensure that students can effectively strengthen the training of professional skills in the process of practice.

(2) According to the characteristics of engineering management specialty, a variety of practice methods can be encouraged. The practice of engineering management specialty covers a wide range of contents. Therefore, according to the voluntary requirements of students, we can encourage students who are in a position to find out their counterparts to carry out decentralized internships, and combine the methods of multi-party consultation and field investigation to ensure the practice quality of this part of students through students regular reports and teachers irregular supervision.

(3) The field practice instruction book requires detailed content and strong maneuverability. When compiling the field management practice instruction book, we should ensure that the content of the guidance book is detailed and concrete. From the significance and goal of the field practice, the main content and organization mode of the practice, to the basic requirements and matters needing attention of the practice, we should pay attention to the detail and maneuverability, especially in the field safety management, we must emphasize the safety operation rules and the security certificate measures.

(4) Make clear requirements for the practice results to ensure the quality of the practice. According to the nature of each practice unit and the students practice mode, the composition and evaluation standard of the practice results should be clarified in the practice instruction book. Practice results are generally composed of practice performance, internship diary and practice summary. Among them, the practice performance is mainly to synthesize the work attitude of the students and the reflection of the field instructor and the daily report to determine, for the internship diary, the content must be targeted, for the practice summary, the content must have the process record of the field practice, the related scene photo, as well as the scene work form and so on.

4. Requirements for practical teaching effect of engineering management specialty

Through the on-site practice, it is necessary to ensure that the practice tasks specified in the practice instruction are completed, no safety accidents occur, no disciplinary action occurs, and the practice of civilized safety is achieved, and a good practice basis is laid for the engineering management professional students of the next stage of practice.

(1) Strengthen the combination of civil engineering management theory and field practice. According to the arrangement of the teaching plan, before the practice of management, the students of engineering management should have completed the courses of building materials, concrete structure principle, engineering survey, engineering project management, engineering valuation and so on, but most of them only stay at the level of theoretical study, through systematic on-site practice, students should deepen their perceptual understanding of the process of construction and the process of site management, so as to achieve the purpose of integrating theory with practice.

(2) To exercise students professional attitude of seeking truth from facts and serious. According to the arrangement of the teaching plan, the management practice is often arranged in July, which coincides with the hot summer, and the construction site conditions as the field practice base of the engineering management specialty are relatively difficult, which requires the students to be able to strictly require themselves to complete the study and implementation of the site management, to deal realistically with the quality and safety problems encountered on the spot, and to take a serious professional attitude. Think about the solution according to the theory learned and the suggestions of the field instructor.

(3) To understand the employment direction of engineering management professionals. In the practical teaching link, teachers can understand the corresponding units related to their major through the establishment of the organizational structure of the practice units, and clarify the specific types of work that the students majoring in engineering management can engage in after graduation, as well as the social demand for applied talents in the case of market economy.

(4) To improve the process design of practical teaching. With the rapid development of economy and the continuous expansion of the construction market, we should start from the design, implementation

and continuous improvement of practical teaching links, improve the teaching process and improve the effect of practical teaching.

5. Concluding

The organization and implementation of field technical quality management practice is the most effective practical teaching link of engineering management specialty based on the cultivation of applied talents. Through on-site practice, it is a process of combining theory and practice that is beneficial to both instructing teachers and college students. For college students, on-site practice not only broadens the knowledge of engineering management specialty, deepens the understanding of the theoretical knowledge of engineering management specialty, but also improves the management ability of actual engineering on site. For teachers, it is easier to find the connection between classroom teaching and engineering practice, and to truly understand the talent requirements and market demand of engineering management major in related industries, and lead to the improvement of classroom teaching methods and teaching ideas by teachers majoring in engineering management, so as to greatly improve the teaching level and make a better practical teaching plan, train applied senior talents of engineering management specialty suitable for construction market.

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