

Exploration of Production Management Practice in Civil Engineering Major

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Abstract. Production management practice is an important link in teaching, a necessary supplement to classroom teaching, a platform for students to get in touch with the society. The students can effectively improve their ability to combine theory with practice and the spirit of innovation by production management practice to prepare for employment and entrepreneurship. With the change of China's higher education from "elite education" to "popular education", how to arrange the production practice of many students effectively and reasonably is the tie that bothers us. To this end, we adhere to the student-oriented, grope about in the practice, constantly summarize, expand the internship base through multiple channels, take the combination of concentration and dispersion, Strengthen organization and assessment, and organize production practice effectively.

Introduction

Production management practice is an important link in teaching and a platform for students to get in touch with the society. With the development of the student's number, how to arrange the production practice of so many students effectively is a problem to us. So we take the combination of concentration and dispersion, Strengthen organization and assessment, and organize production practice effectively [1].

The significance of civil engineering production management practice

The production management practice in the school of civil engineering, which is is an important link in teaching, is arranged in the first half of the fourth academic year for six weeks. Firstly through production management practice, students can get in touch with the society, understand the society, and enhance their views of the masses, as well as their dedication to socialism and sense of responsibility. Secondly the students further strengthen the understanding of the classroom teaching content, deepen and consolidate the theoretical knowledge. Thirdly the students can obtain practical knowledge of production practice by participating in the practice of production and management in the internship unit and comprehensively applying the knowledge they have learned. The ability to analyze and solve engineering problems is cultivated and a solid foundation for them to be competent in their major after graduation is laid. Finally drawing and marking methods of various construction drawings of buildings, structures and hvac, related construction requirements and construction instructions are learned in detail for graduation design and graduation defense.

Civil engineering production management practice facing problems

With the change of China's higher education from "elite education" to "popular education", the number of Civil engineering student of production management practice is markedly increased. In the past, we arranged dozens of students' internships every year, but nearly we arranged hundreds of undergraduates' internships. For example in 2014, 259 undergraduates were arranged for production management practice. In 2015 and 2016, 259 undergraduates were arranged for production management practice. In 2017 and 2018, more than 500 undergraduates were arranged for production

management practice. So more and more students are taking part in the internship year by year. In addition many universities in Jinan offer civil engineering majors, such as Shandong university, Shandong traffic college, and Shandong yingcai vocational and technical college and so on.

On the other hand, the number of local construction sites meeting the teaching requirements is limited and student accommodation of each construction site is also limited. The number of students now exceeds the capacity of the construction site.

So, we face a problem we haven't faced in a long time. How to solve this problem? The key is to find enough places to offer internship opportunities for students. It needs to be carefully laid out and planned in order to ensure the safety of students and internship quality, and successfully complete the internship tasks.

Measures

New problems call for new solutions. At present, many colleges and universities have adopted many countermeasures. Some use the method that student individual contacts internship unit. Some are still organized in production management practice. Some take a combination of the former two. Each method has its own advantages and disadvantages. The first method relieves the pressure of school, but how to ensure the safety and quality of internship is a problem. By the Second method schools are under great pressure. The third method is more flexible, but how to ensure the safety and quality of internship is a problem. Then which method is most suitable for us. Even if it suits us, how can we improve it. This is not just about bringing in ideas, but also need to keep up with The Times. In recent years we have been student-oriented and practical, by constant exploration and continuously reviewing the effective program of production practice is formed basically [2].

The combination of centralized and decentralized practice. In order to contact the internship site as much as possible, we communicate with many construction units and build deep relationships with them. After years of hard work, a number of production practice base are constructed, such as Jinan first construction company, Jinan second construction company, Jinan third construction company, Jinan fourth construction company, China eighth construction bureau, and Shandong construction engineering company.

The construction of the practice base can effectively guarantee the internship of some students, but it is still not possible to offer internships to all students locally. So it is need to mobilize the enthusiasm and the initiative of students to contact the practice site. In order to ensure the safety and effectiveness of the internship, the stipulation is made for the practice place contacted by students and a set of management measures was proposed. Internship sites are no longer local and extend to the province. The qualification of requirement construction unit should achieve one class above. The enterprises should establish a clear and reliable quality management system and occupational health and safety management system. The enterprise is willing to accept students for internship and provide site instructors who meet the teaching requirements. Through the links of site contact list, site acceptance feedback list, communication between teachers and internship units, the college screens and identifies field practice sites. This not only expands the choice of the practice site, but also exercises the students' communication skills and social skills. It enhances students' understanding of the purpose of school teaching and the society.

The organization of internships. We strengthen our thinking, insist on being accountable to the school and adhere to the student-oriented principle. The internship work is carried out in a planned, step-by-step and focused way by overall consideration, careful arrangement and elaborate plan.

Firstly, we follow the safe, diverse, practical and advanced principles to choose the internship location.

The so-called safety refers to the internship site which must be the project undertaken by a large construction enterprise with a level of qualification or above. These companies have clearly defined safety technical measures and good safety regulations from the hardware to provide security for the successful implementation of the internship.

Diversity first refers to the functional diversity of the project, including hotel, residential, exhibition hall, teaching building and office building. The so-called diversity secondly refers to the engineering structure type typical diversity, including frame shear structure, frame structure, tube structure, shear wall structure and brick structure, such as Jinan government affairs center building which is frame structure, pearl tower, the tallest building in Jinan which is tube structure, and laigang eiffel garden which is steel structure and so on.

The so-called practical refers to that the students must understand and master the main process and working procedure in the construction. The most important process of reinforced concrete structure project is reinforced, formwork and concrete process. By checking the progress of alternative projects mainly those main construction projects are chosen. Some projects are very good, but it's capped and enters the decoration stage, which can not be chosen.

The so-called advanced refers to that the production practice not only let students combine theory with practice and master the general construction technology, but also provide a window for students to master new techniques and techniques, and so cultivate students' innovation ability. Therefore, we pay attention to choosing the site where the new technology is applied when choosing the internship site. For example now buildings are generally reinforced concrete structure, but from the point of view of development, the steel structure is very promising. Laigang eiffel garden is made of steel structure. Pearl tower, the tallest building in Jinan, use a rare cylinder structure, high strength concrete, climbing scaffold, and energy-saving and environment-friendly light partition wall. The students benefited a lot during their stay at the site

Secondly, do a good job in internship mobilization, process control is strict, and teaching quality and practice safety ensured.

In order to ensure the safety and smooth start of the internship, first day of internship The internship mobilization meeting was organized and held. The special lectures on safety is held, special lectures on safety is held and the safety management video is watched. These make students clear about the discipline and matters needing attention and establish safety awareness.

In order to ensure the quality, quantity and safety of the internship, the guidance methods and the responsibilities of the instructors are clearly defined. The guidance is as follows. One, the students go to the practice site as a group and each group school appoints an internship advisor to be responsible. The practice instructor makes a tour inspection of the internship of the students and is in regular contact with the site instructor. The practice instructor keeps abreast of internship trends, coaches students to complete the internship program, helps students to solve the problems encountered in the internship to ensure the students internship smoothly. Two, the project manager assigned an experienced engineer as the site instructor for the internship, who is responsible for providing professional technical guidance and safety education to students. Three, for the students of the field scattered practice, practice teacher centrally inspects.

In order to assess the student's practice effect the internship content is clearly defined. During the internship The students should take part in the work as the assistant to the site instructor, give full play to initiative under the guidance of the site instructor, actively complete the tasks assigned by the instructor, and complete the internship task combining with the project.

Students should have an in-depth understanding of the construction drawings of the project, trial records, design changes, and standard drawings. Students should understand the design intent and construction practices. Students should be familiar with engineering structure system, structure arrangement and stress characteristics of members. Students should have a preliminary understanding of the reinforcement details of reinforced concrete structural members and node structures to improve the ability to read pictures. Students should learn how to express architectural drawings, establish the principle of "construction according to drawings", collect data for graduation project .

Students should have a deep understanding of the construction organization design of the unit project, focus on mastering the construction sequence and reasonable overlapping relationship between each process work and understand the whole construction process and the organization and management activities in each construction stage.

Students should have a thorough understanding of the construction procedures for each sub-project, operating procedures, labor organization, quantity quota, construction machinery, quality inspection standard, and analysis and prevention of common diseases. Students should learn to operate in accordance with standards and establish the concept of technical regulations.

Students should participate in a variety of production technology activities, such as drawings came, technical clarification, construction surveying, drawing double sample, technology change, unit engineering construction organization design, formulation and performance of construction technical measures, project budget, production scheduling, quality inspection and evaluation of sub-projects, accident analysis and handling, engineering statistics, test and application of new technology, new process and new material, technical and economic indicators test, security check, collation of production technical data and so on. In the process of independently undertaking or assisting in the above activities, Students should develop the ability to analyze and solve practical problems.

Students should understand the variety, specification, performance and quality inspection standards and methods of various building materials.

Students should learn about the reform measures, operation methods, management systems and economic benefits of various construction enterprises.

Students should choose a topic according to the production technology of the practice site, and research and practice the topic in depth under the guidance of site technicians and teachers.

Thirdly, strengthen the inspection.

End of internship on the basis of reviewing the internship diary, internship report and thesis the link of production practice defense is increased. At the same time through communication with the instructor the student's practice effect is further mastered. In addition in recent years we also send out solicitation forms to internship units and solicit the opinions of enterprises on production practice teaching and management. On base the opinions we are constantly improving the quality of our teaching and receives good results.

Summary

Production practice is the only opportunity for civil engineering students to systematically participate in engineering practice, and also an opportunity for them to learn about the society and integrate into the construction industry. In recent years we respond to new situations and problems, insist on putting students first, grope in the practice, focus on innovation, keep summarizing, optimize the production practice program, and have achieved the goal of teaching. Our students are basically able to jump into roles as soon as they get to work. Enterprise training period is greatly shortened. Students' ability itself is an invisible brand, and so the social influence of the school of civil engineering of Jinan university has been improved.

References

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