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Exploring the Teaching Reform of Landscape Construction and Management based on the Needs of Landscape Industry

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Abstract: In the process of landscape engineering construction management, there are some shortcomings, such as talent shortage, low professional quality, incomplete and accurate files and materials, low project quality, improper cost control and so on. This study takes the practical problems existing in the landscape construction management industry as the starting point, and puts forward the requirements of teaching landscape construction management in combination with the post of landscape constructor and the professional qualification standard of national constructor. The teaching mode of "Double Tutorial System + Project Teaching" is adopted to effectively improve students' cognition and management ability in terms of cost, progress, quality and safety in the process of project construction, so as to lay a good foundation for training qualified landscape construction managers.

Keywords: Construction Management; Project Teaching; Simulation Experiment

1. Introduction

Landscape construction management is a compulsory course for landscape architecture majors. It mainly teaches the basic knowledge and key points of landscape engineering construction management. Its goal is to enable students to master the basic theory and professional knowledge of landscape engineering construction organization and management, and cultivate applied talents engaged in landscape engineering construction organization, landscape green space maintenance and management. The main teaching contents include: landscape engineering construction organization, bar chart, landscape engineering progress plan, landscape engineering construction organization design, landscape engineering construction progress control, quality control, cost control, safety management, labor management, material management, site management, construction data management, as well as landscape engineering completion acceptance and maintenance period management.

This study takes the practical problems existing in the process of landscape construction management as the starting point, combined with the post of landscape construction worker and the requirements of the national professional qualification standard of constructor, takes the construction process as the guidance, emphasizes skill operation, and cultivates students' ability to prevent and solve common problems in the process of landscape construction management.

2. Problems existing in landscape construction management industry

2.1 Shortage of landscape engineering construction management talents and low professional quality

In some construction areas, landscape engineering is characterized as "simple engineering". It is considered that the technical content of landscape engineering is low. Under the characterization of "simple engineering", the bidding is obtained by the lowest price, resulting in vicious competition, which is not conducive to the long-term development of landscape industry. Moreover, the professional quality and comprehensive ability of landscape engineering management personnel are generally not high, there is a great shortage of high-quality landscape management personnel, and the construction management level is relatively backward. The construction organization is chaotic, the planning is not strong, and even the

construction operation violates the regulations, the situations of stealing work and reducing materials and not constructing according to the drawings also occur from time to time.

2.2 Problems in archives and data management of landscape engineering

Landscape engineering requires that the archives must record the real actual situation, so as to provide reliable basis and certificate for future research and practical use. However, at present, the integrity and accuracy of landscape engineering archives are generally not enough to meet the requirements of archives management; Moreover, the connection is poor, and the project archives can not be organically connected, resulting in the data can not be mutually verified.

2.3 The construction quality of landscape engineering is low and the landscape effect is uneven

Managers and management institutions are not professional, the cognition and application of relevant theories are not enough, and there is a lack of perfect quality management system. Some quality management personnel do not have corresponding qualifications, knowledge, technology and experience, and non professional personnel implement quality management in Party A's construction unit and Party B's contracting company; Some landscape engineering companies are directly responsible for the implementation of quality management by non professional management organizations. There are no standardized quality management procedures, methods and technologies, and lack of professional quality management professionals, which will inevitably lead to the disorder of the implementation of quality management, so as to reduce the quality of the project.

2.4 The construction cost management is unscientific, and it often exceeds the budget

First of all, the cost management has not formed a system, and the indicators have not been quantified; Cost accounting is unscientific and cost indicators are not quantified. At present, the financial management of some construction enterprises is completed by manual statements, and a set of scientific quantitative index system has not been established; Secondly, the cost management did not achieve the unity of responsibility, right, benefit and profit, the project did not realize the responsibility system, did not decompose the target cost, did not implement the responsibility in place, did not have a strong sense of responsibility, lax material management and serious waste.

2.5 Insufficient implementation of safety management during construction

In the process of landscape construction, the relevant departments do not pay attention to the construction safety, do not manage the construction process in accordance with the relevant standards and requirements, pay more attention to the construction progress, and the implementation of safety management is not enough. In order to cope with the superior inspection, the construction unit often formulates many safety management measures, but they are not well implemented, resulting in many potential safety hazards in the construction process. Secondly, Party A fails to pay the cost of safe and civilized construction on time, which makes the enterprise simplify safety precautions, and finally leads to safety accidents.

3. Teaching improvement measures of landscape construction management course

Based on the above problems existing in the process of landscape engineering construction management, the following improvement measures should be taken in the teaching contents and methods in the future, so as to cultivate professional management talents more in line with the needs of the industry.

3.1 Improving the importance of landscape Construction Management from the perspective of discipline education and talent training plan

Many colleges and universities classify Landscape Construction Organization and Managements a professional limited course, and the class hours are only 16 class hours. There are no experimental class hours, resulting in insufficient attention of teachers and students, weak learning enthusiasm, poor learning effect and so on. Therefore, we should increase the practical class hours of this course and hire professional project managers to teach, so as to cultivate talents who meet the development of the industry and the needs of enterprises.

3.2 The contents of the teaching materials shall be in line with the national constructor qualification examination

The relevant teaching materials of this course in the market are highly theoretical, with empty and abstract knowledge points, which makes it difficult for students to understand; Knowledge points shall be compiled in combination with actual engineering cases and properly combined with the national constructor qualification examination. For example, quality, progress, cost and safety control are also important contents of the national constructor qualification examination. We can refer to and draw lessons from the engineering cases to write teaching materials.

3.3 Adopting the dual tutorial system + project teaching mode

For the common quality and progress problems in the construction process of landscape engineering, school enterprise cooperation is needed to let students enter the enterprise and construction site, explain in combination with the construction process and technology, and let students understand the common quality problems in the process of project promotion and the links and processes that are easy to delay the construction period. Then, we can guide the students to prepare the construction organization design and schedule, which will be corrected and corrected by the project engineer.

3.4 Strengthening the knowledge connection with relevant courses to realize systematic teaching

In terms of project construction quality, progress and safety, scientific management can only be carried out after mastering the construction technology and technology of landscape engineering. Landscape Engineering is a prerequisite course of landscape construction management, so the connection of knowledge between the two courses must be strengthened; In terms of construction cost control, we need to study systematically in combination with the course Budget and Final Accounts of Landscape Engineering, understand the comprehensive unit price and consumption quota of labor, materials and mechanical equipment required for each construction process, and prepare the construction budget that meets the project quality and progress, so as to fundamentally save costs and optimize management.

3.5 Mastering the construction process, materials and management of landscape engineering by means of simulation teaching

Some knowledge points of project management are obscure and abstract, and the teaching conditions are limited. Students cannot participate in the construction and management of actual projects. Students can conduct virtual construction through simulation experiments such as BIM software to understand the characteristics and functions of materials used in each construction process and technological process, as well as the labor, materials, machines and equipment consumed, landscape effect and project quality after completion, so as to have a deeper understanding of the construction process and

improve the construction management ability.

4. Conclusion

Landscape construction project is a systematic project. Without professional management talents and perfect management system, it is difficult to carry out construction management scientifically and effectively. At present, most landscape companies in China have not established a perfect management system, especially the management system of comprehensive control over the construction process. There are random and random phenomena in the construction management of many landscape projects. Random means that there is no plan and you can solve any problem you encounter; Arbitrary decision-making is disobeying the rules and procedures and disorderly. The main reason for these phenomena is that there is no established management system or the management system is imperfect. The fundamental way to change this situation lies in “people”, which requires years of efforts of people from all walks of life such as the construction unit, construction unit and government supervision department. The professional quality, ideology and basic skills of industry personnel are trained from the study of colleges and universities. Therefore, we must recognize the importance of Landscape Construction Management, and improve the teaching means and level of the course, so as to lay a good foundation for training qualified landscape construction managers, and promote the long-term and healthy development of landscape construction industry.

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