



The Discussion on the Teaching Methods of Practical Training Courses for Intelligent Buildings in Higher Vocational Colleges

Chunling Li*

Guangxi Polytechnic Of Construction, Guangxi Nanning 530007, China. E-mail: lclwing@126.com

Abstract: With the in-depth reform of our country's economic system, the demand for professional talents is increasing in economic development. As a main position for cultivating skilled and application-oriented talents, higher vocational colleges are self-evident in the importance. As a major feature of higher vocational colleges, practical training courses play an irreplaceable role in improving the quality and level of talents. This paper takes the intelligent buildings in higher vocational colleges as an example to discuss the teaching of practical courses.

With the rapid development of modern intelligent buildings and smart homes in our country, the demand for intelligent talents has increased dramatically. In the early 21st century, China approved the establishment of the "intelligent building engineering technology" major in higher vocational colleges. This major integrates computer communication technology, construction technology and automatic control technology. This major is very applicable and practical, but many higher vocational colleges were weak in practical training. Next, I will discuss some reflections on the teaching of training courses for intelligent buildings in higher vocational colleges.

Keywords: Intelligent Buildings In Higher Vocational Colleges; Practical Training Courses; Teaching Methods; Discussion

1. Problems in the teaching methods of practical training courses

1.1 The updating of contents is slow

The intelligent building major in higher vocational colleges involves many disciplines, with complicated contents and short update period of technical knowledge. It needs to be highly consistent with the building intelligent engineering industry and the technology of the enterprise. After graduating and entering into work, students find that the knowledge they learn in the school is outdated. In addition, many high vocational colleges have insufficient teaching equipment and lack funds in intelligent buildings, which is not conducive to training students' practical ability.

1.2 The content of practical training lacks uniformity and comprehensiveness

The intelligent building major is still in its primary development stage in China. Only a few higher vocational colleges have set up the major. Objectives and courses of the talent training in different colleges are also different. For example, some focus on mechanical applications and some focus on electrical control, so all higher vocational colleges have not yet reached an agreement on talent training programs. Secondly, the practical training teaching of this major is mainly based on basic courses and professional core courses. The links between the various training programs are not close. Many teachers mistakenly regard comprehensively practical training as basic skill training, which leads to the lack of value in practical training and the inability to meet the development needs of intelligent engineering industry and the technology of enterprises.

1.3 Teaching methods of the practical training is outdated

At this stage, many higher vocational colleges still use the traditional "indoctrination" theoretical teaching model

to carry out practical training teaching. "Project management", "equipment installation" and other highly practical training courses are still mainly based on classroom explanations, which is boring and tedious, so students easily lose their interest and enthusiasm for learning, and even get tired of learning, leading to poor teaching effect and affecting students' long-term development.

2. The innovation in teaching methods of practical training courses for intelligent buildings in higher vocational colleges

2.1 Adopt diverse teaching methods

Firstly, build diverse practical training models. Under the new situation, in the process of teaching, higher vocational teachers can set small projects and small systems that are closely related to the content of the course as tasks in order to effectively enhance the students' operational and practical skills, allowing students to freely choose relevant tasks according to their needs and interests. Therefore, it not only can effectively stimulate students' interest and enthusiasm for participation, improve their learning initiative and enthusiasm, but also add many projects and systems without affecting classroom teaching.

Secondly, the task-driven approach. In the teaching process, the teacher should divide the students in the class into several groups, refine the large-scale engineering project cases into different small projects, require students in each group to complete them by cooperation, and finally discuss together in the whole class to merge into the final large-scale engineering project. A large number of teaching practices have proved that this teaching method not only can train students' operational ability and practical ability, but also effectively train students' professional ability and comprehensive literacy to achieve comprehensive development.

Thirdly, the project teaching method. Every semester, the course of the intelligent building major involves a lot of practical training contents, which needs teachers and students to make many projects into a project list, and then check the results of the project according to the actual standards of the enterprise. The results are remarkable.

2.2 Establish a perfect practical training course system and talent training model

Firstly, based on engineering applications, establish a talent training model of training bases. With the in-depth reform of the higher vocational education system, the school-enterprise cooperation model has been deepened. Therefore, in the teaching process, it is necessary to deeply study the job requirements of the enterprise, establish an "order-based" talent training model according to the actual situation of the enterprise, and optimize the talent training goals and cultivating links, clarify the teaching goals and plans of the practical training courses, formulate effective teaching plans of practical training courses, innovate the training model, and stimulate the internal driving force, so as to build a high-quality talent training mechanism. Besides, it is necessary to be based on actual construction engineering projects, through deepening the design drawings and systems, and to build a system engineering that not only meets the needs of actual construction engineering, but also conforms to the training model of the training base.

Secondly, based on engineering applications, establish a perfect practical training course system. Under the new situation, higher vocational colleges should innovate and develop curriculum modules in accordance with the requirements of the talent training model of construction engineering, clarify the professional practical training modules, draw on the curriculum system, work skills and cutting-edge skills in this major from many excellent universities at home and abroad, and be committed to building a practical training course system that meets the needs of this major and meets the development of industrial structure. Besides, it is necessary to strengthen the closeness between classroom theoretical teaching of the practical training module courses and the practical training teaching to ensure that the practical training courses can successfully solve the problem that the proportion of professional core module courses is too large.

2.3 Deepen the school-enterprise cooperation model

The goal of higher vocational colleges is to cultivate application-oriented and skilled talents. Therefore, it is very important to strengthen the relationship between schools and enterprises. When formulating teaching contents, it is not only necessary to introduce new technologies, new processes and new models of industries and enterprises development,

but also to ensure that the curriculum is consistent with the professional positions of the enterprise. It is also vital to pay attention to guiding students to master the operation links of intelligent building engineering, and follow industry laws, regulations and system norms. Secondly, as professional teachers, they must always maintain advanced ideas, establish a comprehensive quality education concept, actively organize students to participate in national, provincial and municipal intelligent building engineering vocational skills competitions, guide students to continuously consolidate their knowledge during the competition, exercise their theoretical knowledge and professional skills, cultivate vocational skills, establish good professional qualities, improve the post competence of students, and at the same time cultivate their team consciousness and team abilities, so that they can stand out in the fierce market competition.

2.4 Cooperative learning

Although our country vigorously advocates new curriculum standards, the influence of the traditional exam-oriented education system is more entrenched. As teachers, they should avoid overnight successes, but should slowly transit from traditional teaching methods to project-guided teaching methods. Higher vocational colleges should focus on establishing a teaching team composed of professional teachers and enterprise elites. They should design teaching projects in accordance with actual needs, give full play to the role of on-campus and off-campus training bases, and design complete projects and innovate teaching in combination with industry standards and enterprise standards. Specifically, the teaching team should create a real and good working environment and atmosphere according to the construction site of the intelligent building industry, use the physical objects on the engineering site to teach, and guide students to cooperate and explore with each other through the group cooperative learning mode to complete the work task together, which realizes the unity of "teaching and doing". In the process of cooperative learning, teachers should walk down the altar of authority, fully respect the student's teaching subject status, divide the students into several groups through the role-playing method, and students in each group work together to collect equipment information and formulate and implement the plan and program. In the process of specific operations, they remind each other and evaluate each other, and then they are able to obtain job vocational skills, accumulate work experience, build a perfect professional knowledge system, and finally they are able to meet the job requirements and achieve long-term development.

3. Conclusion

With the rapid development of modern information technology, the construction industry has undergone tremendous changes. The degree of intelligence, informationization and automation of construction projects is becoming higher and higher, and the requirements for talents are also increasing. Under the new situation, the intelligent building major in higher vocational colleges should focus on advancing with the times, update teaching concepts, innovate the curriculum system, increase the proportion of practical training courses, and innovate teaching methods, so as to continuously improve the quality and level of teaching.

References

1. Hou Zhengwei/ Ke Hui. Preliminary Study on the Design of Comprehensive Practical Training Project for Higher Vocational Intelligent Building Engineering Technology Based on Project Curriculum Theory [J]. Agricultural Staff, 2017(18):117.
2. Huang Kehua/ Chen Chunmei. Exploration on the Reform of Comprehensive Practical Training Courses for Higher Vocational Architecture Majors [J]. China Vocational and Technical Education, 2010, (008):78,88.
3. Lu Zhou. Research on the Construction of Comprehensive Practical Training Course for Higher Vocational Intelligent Building Engineering Technology [J]. Teaching Examination, 2017, (017):41.
4. Luo Xiaosuo. Research on the Construction of Practical Training Course System for Higher Vocational Intelligent Building Engineering Technology Major [J]. Western China Quality Education, 2017, 003(005):122.