

Teaching Innovation under the Mode of “Integration of Contest And Teaching” in the Higher Vocational Courses of The Major in Engineering Cost

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Abstract: It is an effective way to implement the teaching innovation under the mode of “integration of contest and teaching” in the higher vocational courses of the major of engineering cost. Teaching innovation under the mode of “integration of contest and teaching” is according to the principles of combination with the students’ vocational skills contests and teaching. The vocational skills contests’ rules and contest projects are introduced into the actual professional courses contents. Teaching innovation in the courses content, teaching methods and construction of teachers promotes students’ knowledge, ability and quality throughout the whole process of learning professional courses, and improves the quality of teaching and the professional teachers’ practical teaching ability, so as to promote vocational education’s reform and innovation of professional courses.

Keywords: Integration of contest and teaching; Professional courses; The teaching innovation

As an important part of our education system, vocational education in our country has developed rapidly in recent years, and has cultivated a large number of high-quality technical skills talents for our country^[1]. Vocational skills contests for higher vocational colleges have been held to cultivate more innovative and applied technical skills talents to implement the national strategy for vigorously developments in vocational education. Vocational skills contests are closely connected with the contents of professional courses, and contests of all types and levels are closely related to the courses’ contents, so it’s a necessary way for the organic integration with vocational skills contests and teaching.

Teaching innovation under the mode of “integration of contest and teaching” is according to the method of combining with professional skills contest and the teaching. The vocational skills contests’ rules and contest projects are introduced in the actual course content, for example in practice teaching. The teaching models which is actively introduced in the courses stimulate students’ learning interest and enthusiasm, promote the cultivation of the students’ professional accomplishment and professional ability, and improve the teachers’ practical teaching abilities, so as to improve teaching quality^[2] and promote the innovation of professional courses in higher vocational education.

1. The problems in the teaching innovation

1.1 Determine the courses contents

Under the mode of “integration of contest and teaching”, rules and projects of various professional skills contests are introduced in the actual courses. Be clear about levels and kinds of skills contest projects and contents which higher vocational students can take part in, such as provincial and national vocational skills contests. Then reform course contents according to the specific contents of the contests.

In specific teaching process, we need to integrate skills contest contents, promote the effective combination of professional core courses and skills contest contents, optimize of the teaching activities further, enhance the effectiveness of the courses and teaching activities, and improve students’ comprehensive quality and professional ability to engaged in the work of the project cost, in order to improve the work’s effects of professional personnel training.

1.2 Innovate teaching methods

The mode of “integration of contest and teaching” requires to make full use of information technology in practical teaching. In information age, teaching methods need to be innovated and the requirements of professional skills contests, especially in the process of innovative teaching methods, it is need to strengthen the application of information technology. We should actively develop online open courses and course resources, build or use vocational education network teaching platforms, and strengthen the construction of virtual simulation training room facilities, etc. On the basis of strengthening the students’ mastering the professional knowledge and skills, we should focus on cultivating the professional comprehensive quality and ability in teaching.

1.3 Construct teaching staff

It need to improve teachers’ practical teaching ability in the teaching innovation under the mode of “integration of contest and teaching”. Schools actively organize teachers to participate in the enterprise practices, learning communication, skills training and professional education and other activities, and send teachers into the advanced enterprises, participate in the projects, strengthen their practical abilities and engineering practice experiences, in order to create “double type” teachers^[3]. The effective construction of the teaching staff can provide more professional teaching guidance and skills contest guidance for students, and ensure the improvement of the overall teaching quality of the courses under the mode of “integration of contest and teaching”.

2. Problem solution methods of teaching innovation

2.1 Modify the courses standard

We should set up the talent training concept of “integration of contest and teaching”, integrate the standards of the vocational skills contests, incorporate the norms and requirements of the skills contests into the professional courses standards, integrate the contests and courses teaching organically, and take the guidance of students to participate in the skills contests as one of the effective way to improve the teaching quality.

2.2 Adjust the course content

The skills contest projects are introduced into the teaching courses as examples for teaching, and the contest contents and standards are organically integrated into the professional courses teaching. In the actual teaching, the contest projects are introduced, and the contest examples are used to strengthen the practical skills of engineering cost.

2.3 Innovate teaching methods and means

2.3.1 Establish the interactive mechanism between vocational skills contests and courses teaching

Vocational skills contests and classroom teaching are closely linked and mutually promoted. In order to play the complementary role between them, a reasonable and effective interactive mechanism should be established^[2]. After the vocational skills contests, the instructors should conduct and summarize in-depth analysis of the match points, and communicate with the teachers in team, so as to grasp better the latest progress of the skills contests. Through communications and discussions, instructors analyze the deficiencies in the teaching or needs to adjust in the contents. In the teaching process, a comprehensive discussion and feedback mechanism will be formed to make full preparations for the future contests.

2.3.2 Strengthen the application of information technology

In teaching, a variety of information teaching platforms, high-quality resource sharing courses and online open course platform websites are adopted to establish digital teaching resources with relevant software resources. Virtual reality technology is adopted to strengthen the construction of virtual simulation training room facilities. Teachers make full use of the intelligent teaching platforms to carry out independent learning, teaching, group discussion, task-driven teaching, on-site teaching and other ways of teaching.

2.3.3 Strengthen the construction of courses practice

In addition to integrating the contents and projects of the skills contests into the courses contents, the construction of the on-campus training room in school should also be increased. At present, our department has built a number of training rooms, such as calculation and valuation training room, BIM technology application and virtual simulation training room, etc. In addition, on the basis of the deep integration of schools and enterprises, it is necessary to strengthen the construction of off-campus training rooms and training bases, so as to improve the conditions of practical training and teaching in professional courses, and truly meet the actual requirements of teaching and contests. The effective combination of on-campus practical teaching and off-campus skills training can effectively improve the pertinency and effectiveness of skills teaching, strengthen students’ practical abilities and professional qualities, and realize the effective connection between courses teaching and skills contests, and realize the goal of talent training more efficiently.

2.3.4 Improve the multiple courses evaluation systems

In the process of integrating vocational college skills contests and courses innovation, we can use not only the contents and requirements, but also the evaluation methods of skills contests. It is helpful to promote the perfection of the courses evaluation systems by introducing the evaluation methods of skill contests and constructing a perfect diversified evaluation systems of vocational education courses.

2.3.5 Create professional skills contests clubs

With actual projects , in view of the skills contest contents, our department established multiple learning interest groups and communities, such as BIM community, calculation community, etc. Using the second class activity time, the students mainly learn engineering drawing , modeling with BIM , calculation and valuation of the contest contents, and carry out professional basic skills training, individual skills training and comprehensive skills training to promote the students' abilities in skills contests and professional comprehensive abilities.

2.4 The construction of teachers

Teachers in schools and enterprises also conduct skills contests. Schools should choose teachers with profound professional skills, rich engineering experience and strong sense of responsibility. Enterprises should choose skilled craftsmen from the front line of enterprises, and introduce skills contests projects and real engineering projects of enterprises for teaching. Schools should pay attention to organizing teachers to participate in enterprise training, learning exchange, skill training and professional training and other activities, which is conducive to helping teachers accumulate engineering practice experiences, improve the professional and technical levels of teachers, and promote the overall improvements of teaching quality ^[2].

3. Conclusion

Through the mode of “integration of contest and teaching”, we fully mobilize the enthusiasm of the students' learning and skills contests, improve students' professional qualities and accomplishment further. In students' skills contests, the students in our department won the excellent team prizes of the National Digital Architectural Innovation Application Contests in recent years, etc.

Through the mode of “integration of contest and teaching”, teachers find the deficiencies existing in the teaching process, innovate in the courses contents, teaching methods, teaching staff construction, and also improve the abilities of teaching team, guarantee the achievements of the teaching goal, so as to improve the confidence of the teacher's teaching innovation and results. Teaching reform initiative has been greatly improved, in order to eventually realize the reforms of teaching mode and advancements of talent training quality.

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