

Research on Practical Teaching Reform for Cultivating Talents Based on Innovation and Entrepreneurship

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Abstract. Focusing on the cultivation mode of innovation and entrepreneurship, the practical teaching of university is reformed and developed based on the Vocational Skills Competitions. The single assessment method with scores was broke through the teaching reform, which called competition-examination promote each other. The practical skills are important parts for the assessment of students. The professional knowledge could be consolidated and improved further by the Vocational Skills Competitions. Then the talent training mode combined the theory teaching with the Vocational Skills Competitions is carried out based on the innovation and entrepreneurship. The Vocational Skills Competitions, combined training mode between university and enterprise, Maker Space are introduced into the education, which improves and perfects the teaching system. The scientization, normalization and systematization of education are promoted by improving the operation mechanism of practical teaching and quality evaluation criteria.

Keywords. Vocational skills competition; Teaching reform; Practical skills

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1. Introduction

The cultivation mode of innovation and entrepreneurship should pay close attention to the new development era, forge ahead with determination and innovate way of education under the change unseen in a century. Vocational education organizes actively the Vocational Skills Competitions with the aim of training high-quality workers and technical personnel. And then, explores the training mode of high technology skills, which receives strong support from the competent departments of education and universities. The Vocational Skills Competitions is an important tool for improving the quality of education , which promotes the education and teaching reform and improves the professional skills. At present, the practical teaching of vocational colleges faces with many problems and difficulties, such as, the alignment between practical teaching and Vocational Skills Competitions is low, and the Vocational Skills Competitions is difficult to promote the professional skill level, which constrains the development of professional ability and the improvement of training quality.

2. Establish training objectives of professional skills

The skilled personnel training of vocational college is closely related to the industry sectors. As the employment situation becomes more and more serious, the training objectives of professional skills can no longer ignore reality. New requirements, such as innovation ability and operation ability, are put forward according to the Vocational Skills Competitions, which causes the traditional teaching must be changed. Based on this, the training objectives of School of Power Transmission and Transformation Technology, Northeast Electric Power University are that on the premise of giving full play to students' subjective initiative, and students become the main body of teaching, not passive recipients. Students' practical ability is tested, and their shortcomings are discovered by themselves through the Vocational Skills Competitions. The training objectives of vocational college should separate from the undergraduate college, and should focus on the vocational skills, which can improve the employment success rate of students. School of Power Transmission and Transformation Technology relies on the Vocational Skills Competitions, and inspires the innovation ability of students, which can implement the talent training objectives.

3. Optimization of the curriculum system

The Vocational Skills Competitions basically covers the main content of the professional qualification requirements of electric power technology, and reflects the latest development trend of the power industry and the requirements of the talent specifications of the power industry. So it is important to integrate curriculum system between Vocational Skills Competitions the theoretical course contents, which achieves effective connection between course content and professional standards. The Vocational Skills Competition promotes the construction of integrated curriculum system. Based on actual work tasks as the core of project teaching requirements, the college and well-known electric power enterprises jointly develop curriculum contents, and reconstruct course content and structure. Then the practice training course reform based on working process is established, and the curriculum system with vocational ability training as the core is integrated. Relying on the Vocational Skills Competitions, curriculum development and curriculum resources construction are promoted. The Vocational Skills Competitions are fully applied to the daily course teaching in order to provide practical teaching results and teaching resources. And then, the Power technology professional teaching resource libraries are further improved, what's more, it is applied it to the daily teaching. The new type teaching materials and the development of information resources are developed by the colleagues and Well-known electric power enterprises. The new teaching mode ensures that the practical teaching hours account for more than half of the total class hours, and increases the electrical basic skills training for students, which can effectively promote the teaching reform of electric power technology specialty.

4. Innovation of practice teaching model

The Vocational Skills Competitions are direction of specialty teaching reform to the power engineering. So the practice teaching mode is promoted, and the Vocational Skills Competitions and theory teaching are further integrated. The special practice course training is carried out in the form of practical training based on the change of teaching situation with the situation of electric power competition. The competitions and practice teaching activities form a benign interaction through classroom experiments, comprehensive practical training and on-the-job practice to cultivate students' basic electric power skills. The open training classrooms are built with the aim of Cultivating students' innovation consciousness, practical ability and power core skills. The second classrooms are created with the aim of interactive mechanism among study, competitions and practices, and all levels of competitions are connected based on the integrated practice teaching system. Most of students have participated in Vocational Skills Competitions through the model of promoting teaching-promoting learning- promoting training- promoting training, which achieve the common improvement and all-round development. The integration of electric power skill competition and skill appraisal promotes

the reconstruction of teaching assessment and evaluation system. Students participated in various competitions as shown in the Figure1 and Figure 2.



Figure 1. Professional skills Competition.



Figure 2. Office software operation skills competition.

5. Building of practical training teaching platforms

New technologies, processes and skills are widely used in the Vocational Skills Competitions. The simulation environment used for the typical work tasks in production project are built for the power industry. The Vocational Skills Competitions promote the college and the electric power industry to integrate actively. It is necessary to establish long-term cooperative partnership with electric power enterprises, such as, production of the training base, which can be promoted by the Vocational Skills Competitions. Because the Vocational Skills Competitions usually comes from the actual power operation line. School of Power Transmission and Transformation Technology cooperates with well-known electric power enterprises to build a high-level productive training base integrating practical teaching, enterprise real operation and social and technical services, and integrates the power skills competition project with the construction of the training base, which promotes the education level. In turn, the Vocational Skills Competitions promote the perfection of the school training teaching base. In order to meet the needs of the Internet plus vocational education initiative, the college invites power industry enterprise experts to participate in the functional planning of the training classrooms, and provides a real training environment for students' comprehensive skills training. The virtual simulation

factory and other network learning space are built and applied, which improves the power practice education level. The flow chart of student ability cultivation is shown in Figure 1.

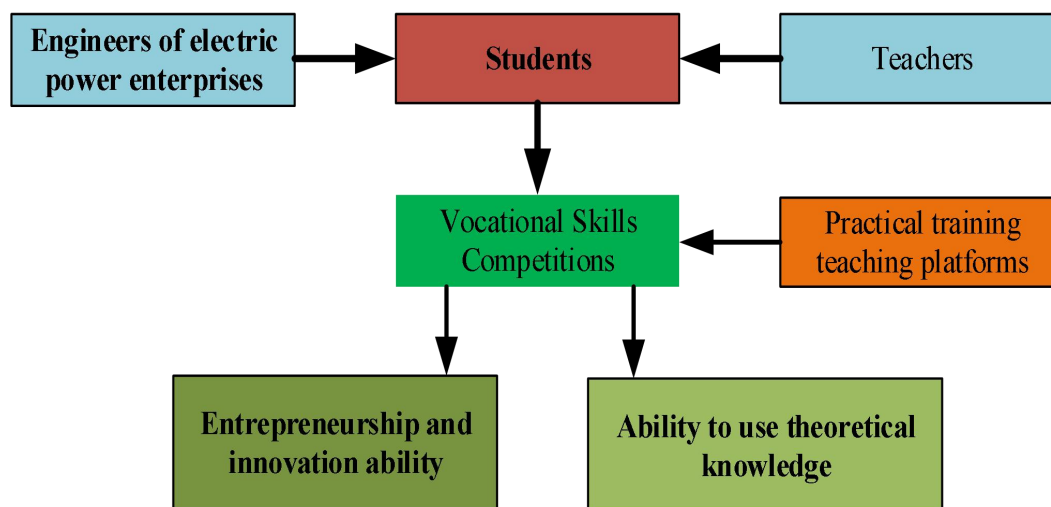


Figure 1. Flow chart of student ability cultivation.

6. Construction of teaching staff

The Vocational Skills Competitions require the professional teachers have high teaching ability and professional skills, that is the teachers have both theoretical teaching ability and practical teaching ability. This requires teachers majoring in electric power to pay close attention to the latest development trend of electricity-related industries, and master the new power technologies, new processes, new methods. What's more, the Vocational Skills Competitions can promote the training of teachers, and constantly improve teaching ability and professional skills. On the one hand, relying on the power skills competition platform, professional teachers in higher vocational colleges are trained through technical training and practice guidance, and integrate the summation from the competition into the daily teaching. On the other hand, colleges provide a platform for young and middle-aged teachers majoring in electric power technology, and send teachers to participate in teaching and technical training. The growth of professional teachers is accelerated as the improvement of practical operation skills and professional quality. In brief, The Vocational Skills Competitions have promoted the construction of college teachers, and improved the professional quality and skill level of professional teachers. At the same time, excellent technical personnel of electric power enterprises are attracted for the part-time school teachers. School of Power Transmission and Transformation Technology has gradually formed a team of teachers with high professional and technical level and rich practical experience.

7. Conclusion

The Vocational Skills Competitions are not only a chance for students to show themselves, but also a good platform for self-improvement. The competitions take practical engineering projects as the platform, which requires students to master the knowledge of all disciplines comprehensively and learn to comprehensively apply the knowledge of relevant disciplines. It is difficult for students who are used to single subject teaching and single subject examination, of course, it is also easier to ignore. In addition, The Vocational Skills Competitions not only improve students' professional and technical skills, but also exercise and improve students' practical ability, psychological quality and teamwork. As a beacon leading the direction of curriculum reform, The Vocational Skills Competitions requires the teacher teams to constantly absorb teaching experience and improve teaching ability, which can

promote the curriculum construction and improve the teaching environment in colleges. Meanwhile, it is vital for promoting the scientific development of the cultivation of innovative and entrepreneurial talents. Finally, high-quality human resources are provided to the social and economic development.

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Conflicts of Interest

There is no conflict of interest.

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