

Exploration of Improving the Practical Teaching Quality of Engineering Specialty in Local Undergraduate Colleges

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Abstract: In view of the shortcomings of the practical teaching of engineering major in local universities, some suggestions were put forward from the aspects of the practical teaching model, the evaluation system and the faculty construction, so as to provide reference for the construction of practical links in cultivating innovative talents.

Keywords: engineering specialty, practical teaching, teaching quality, exploration.

1. INTRODUCTION

Practice teaching is an important teaching link for the training of students' comprehensive ability. It plays an irreplaceable role in cultivating and improving students' practical and innovative abilities in engineering universities. Through the text materials and interviews with the students, it is found that certain achievements have been achieved in practical teaching of our school, but there are also some shortcomings. For example, some students themselves are not correct in practice teaching, and fail to attach importance to practical teaching. There are many problems in practice teaching, such as single methods and means, lack of corresponding teachers that have rich experience in engineering practice, imperfect laboratory assessment and so on. In order to improve the quality of the undergraduate practice teaching in our university, some suggestions are put forward to provide reference for the construction of practical links in the training of innovative talents.

2. CHANGING IDEAS AND IMPROVING THE POSITION OF PRACTICAL TEACHING

The school should establish and improve the practical teaching management mechanism and system guarantee mechanism and attach importance to the construction of teaching staff in practical teaching, and strengthen the process management of practical teaching, and increase the proportion of the achievements of the practice teaching, and further improve the status of the practice teaching. The school should form an atmosphere of emphasizing practice teaching. Only by valuing practical teaching ideologically, can teachers and students be fully involved in practical teaching, and the effect of practical teaching can be guaranteed.

3. CHANGING TEACHING MODE AND ADOPTING PERSONALIZED TEACHING METHOD

In order to stimulate interest of the students in practice and improve their initiative and creative ability, practical teaching should be transformed into a comprehensive, designed and innovative model. The proportion of design and comprehensive practice should be increased. In practice teaching, the status of the students should be respected, and the students should be allowed to follow the teaching requirements and actively use the theoretical knowledge they learned to design experiments and achieve innovation in experiments.

In the practical teaching, great importance should be attached to providing students with aptitude-based teaching. The different teaching methods should be adopted according to the different characteristics of the students, so as to achieve individualized practice teaching. According to the characteristics and needs of students, the practical teaching projects at different levels should be designed, so that all students' practical ability will be greatly improved.

4. CONSTRUCTING A SCIENTIFIC AND RATIONAL PRACTICE TEACHING EVALUATION SYSTEM

It is necessary to formulate standard practice teaching assessment standards, and the single assessment standard should be abolished. The assessment of practical teaching should focus on the combination of process assessment and result assessment. In order to stimulate students' enthusiasm in practical teaching, the following measures should be taken.

- (1) The scientific assessment system for practice teaching should be established. The evaluation system should combine target assessment with process monitoring and pay attention to students' ability training in the process of practice teaching. The process management needs to be strengthened.
- (2) It is an important guarantee for improving the quality of practice teaching to strengthen the management of practice teaching and improve rules and regulations and practice teaching quality monitoring system. Through the formulation and implementation of rules and regulations concerning practical teaching, the practice teaching should be normalized, standardized and scientific.

5. IMPROVING THE PRACTICAL TEACHING CONDITIONS INSIDE AND OUTSIDE THE SCHOOL

Problems such as obsolete and backward experimental equipment seriously restrict the effective development of practical teaching in our university. It is imperative to increase investment and improve the conditions of practical teaching.

- (1) In order to improve the practical teaching conditions, schools should integrate practical teaching resources, co-ordinate the use of government funds, and avoid repeated purchases and idle equipment and other phenomena. In the case of insufficient government input, schools should strive to broaden the financing channels and actively strive for funding from enterprises, associations and alumni.
- (2) In order to improve the quality of education, cultivate high-quality innovative talents, provide talent and intelligence support for the production and development of industry and scientific research service in the field of science and technology, promote the three improvement of teaching, scientific research and production, and finally achieve a win-win situation, the school should strengthen the construction of the internship base both inside and outside school, and adopt the practice teaching mode combining production, learning and research. Production internship is no longer in the form.

(3) to strengthen the cooperation of universities, enterprises and scientific research institutions to achieve the seamless docking of the school practice teaching and the society, and to train practical talents that meet the needs of the society. Inter school cooperation should be strengthened, and the practical teaching resources (such as the content of experimental teaching, teaching model, teaching team, etc.) should be shared, and credit should be recognized each other, so as to make up for the shortage of practical teaching resources and improve the quality of practical teaching.

6. STRENGTHENING THE CONSTRUCTION OF TEACHING STAFF IN PRACTICE TEACHING

Teachers are the main body of promoting practical teaching. Their knowledge, ability and quality structure are directly related to the quality of students' practical teaching and the quality of training.

(1) Schools should do a good job in team building, formulate relevant policies, have plans and targeted training for existing teachers, so as to improve teachers' practical teaching ability. At the same time, the corresponding assessment and incentive mechanism are set up to attract and encourage high level teachers to serve as the full-time teachers of the experimental center (room), and to establish a high level experimental teaching team.

(2) Schools should create environment and conditions conducive to the growth of practical teaching teams. Schools should provide teachers with various opportunities or create conditions for teachers to go to the relevant departments, companies, and enterprises to work out on a regular basis, so that teachers can constantly update their knowledge, understand and absorb the latest scientific research results.

(3) Schools should introduce teachers through multiple channels to increase the proportion of "dual-qualified" teachers. In order to employ engineers and experts with strong practical ability and practice experience as part-time teachers in the school to undertake appropriate practical teaching work and make use of their rich practical experience to carry out practical teaching to make up for the practice of teachers and improve the effect of practical teaching, the corresponding mechanism for evaluation and employment should be formulated.

7. MOTIVATING STUDENTS TO PARTICIPATE IN EXTRACURRICULAR ACTIVITIES

Extracurricular practice can not only stimulate and cultivate students' interest in the profession, exercise hands-on and practical skills, but also cultivate the spirit of the team and the ability to communicate with others, and so on. But through interviews, it is known that there is a relatively low level of student participation. In order to improve more students' practical ability and the ability of scientific and technological innovation, the school should establish a better guidance and incentive mechanism, make full use of the students' spare time to carry out more practical activities, and enable more students to participate in extracurricular activities.

8. CONCLUSION

To improve the quality of practice teaching, the students should not only realize the importance of the practice teaching, but also the teachers should pay attention to it. The school should actively build the practical teaching base and perfect the practice teaching management system. In short, the improvement of the quality of practice teaching needs the joint efforts of schools, students, teachers and all sectors of society.

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