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Research on the Construction of Practical Teaching System of Mechatronics Technology Specialty in Higher Vocational Education

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ABSTRACT. *Mechatronics technology major is also known as mechanical and electronic engineering. Due to the rapid development of China's economy, this major is not only widely used but also has a very good development prospect. The teaching of mechatronics technology mainly includes mechanical technology, electrical and electronic technology, microelectronic technology and so on. In teaching, teachers not only impart theoretical knowledge, but also pay more attention to students' technical mastery and practical operation. This paper mainly introduces the present situation and problems of the practical teaching of mechatronics technology specialty in higher vocational education, as well as the ways and methods of how to promote its development.*

KEYWORDS: *Higher vocational education, Mechatronics technology specialty, Practical teaching system, Construction research*

1. Introduction

Higher vocational education is not only different from the traditional teaching but also different from the teaching system implemented by the new curriculum standard, it has its own development of the education system. The purpose of higher vocational education is to train more high-tech talents needed by the society, improve the employment rate of students, promote social and economic development, and realize this virtuous circle. However, there are still some problems in higher vocational education at present. For example, part of the teaching technology in higher vocational education is rarely needed in society, and students can not find a job corresponding to the technology they have learned after graduation. Therefore, how to cultivate the technical talents needed by the society and how to make students useful is the primary problem to be solved in the current higher vocational education system.

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2. The Present Situation and Problems of Practical Teaching of Mechatronics Technology Specialty in Higher Vocational Education

With the continuous development of China's economy, the state pays more and more attention to the development of education. And cultivating high-quality technical talents who meet the needs of the society is also an important requirement for the development of education. Higher vocational and technical college is also an important teaching place for national technological development. With the improvement of higher vocational education, the practical teaching system has been widely used and recognized by the society.

Because the development time of mechatronics major is relatively short and still belongs to a new industry, teachers still have many problems in the teaching process. For example, first of all, many teachers are influenced by traditional teaching, which leads to the explanation of theoretical knowledge as the main body in classroom teaching. And the students' practical application of mechatronics is less, and the application efficiency is also very low. Secondly, because the teaching facilities of the school are relatively backward, the teaching methods of teachers are limited in the process of practical teaching, so the teaching effect is not obvious. After graduation, many students are unable to adapt to the application and development in real life and lack of technical ability.

3. Practical Research on the Practical Teaching System of Mechatronics Technology Specialty in Higher Vocational Colleges

3.1 Set UP a Correct Teaching Goal

Correct teaching objectives can effectively guide that teaching activities can be carried out effectively. In order to better construct the practical teaching of mechatronics specialty, teachers must set a clear goal of how to cultivate students' professional accomplishment and technical requirements. In the process of mechatronics teaching in higher vocational colleges, teachers are required to impart theoretical knowledge to students and at the same time make professional ability plans for students to move towards the society in the future. For students majoring in mechatronics, vocational ability planning should not only consider one or two aspects, but also social vocational requirements and future career development trends. Only in this way can we cultivate mechanical and electrical talents who can better meet the needs of social development. In the process of teaching, teachers should give priority to practical teaching, let students learn to communicate and cooperate with others in the process of practice, improve students' social ability and professional innovation ability, and develop students' good professional habits.

3.2 Improve the Teaching Content and Keep Up with the Market Demand

The practical teaching content of mechatronics major is not isolated but systematic and complete and closely related to each teaching content. Because the machinery market is constantly changing, teachers are required to pay real-time

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attention to the dynamics of the market. Actively learn advanced technology according to the requirements of talents needed by the enterprise. In the process of teaching, teachers need to constantly optimize and adjust the teaching content and impart advanced technology to the students.

Mechatronics major includes many subjects. Teachers of various subjects should communicate more with each other in the teaching process, and schools can also carry out academic research activities on a regular basis. According to the level of students' knowledge mastery and technical ability, make a teaching plan to enable teachers to complement each other and integrate resources. Only in this way can the teaching of various subjects make common progress and development.

3.3 Improve the Material Environment and Humanistic Environment of Teaching

In order to provide objective conditions for practical teaching for mechatronics majors, most higher vocational colleges will adopt the site selection method of training base construction. The construction of practical teaching environment is inseparable from the joint efforts of higher vocational colleges and peripheral enterprises. Through the communication between higher vocational colleges and enterprises, the goal which is more conducive to personnel training and the content of practical teaching are finally determined. As far as possible, some high-end advanced technology and equipment can be introduced to the campus training base, and the training base can be planned and designed more scientifically. Certainly, it is far from enough to improve the material environment of higher vocational colleges. It is necessary to improve the teaching environment of mechatronics in all aspects by improving the material environment and paying attention to the humanistic environment at the same time. First of all, in-service teachers in higher vocational colleges should conduct teacher training regularly to ensure that teachers have excellent professional level and technical ability. At the same time, higher vocational colleges can also regularly invite outstanding talents from the society to give lectures or participate in students' practical teaching. In this way, students can be taught to deal with more problems that will arise in practice, broaden their horizons and improve their comprehensive ability. Certainly, schools should also pay attention to the standardization of students' technical operation. Improve the management system of practical teaching and improve the enthusiasm of students, so that teaching resources can be allocated reasonably and the teaching level of practical teaching can be improved.

4. Conclusion

For higher vocational colleges, the cultivation of students' professional and technical ability is the key to the school. Practical teaching is very important in the teaching of mechatronics specialty. Higher vocational colleges should be based on reality and actively improve teaching quality, which can train more useful talents for the country.

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