

Reform of Talent Training Mode of Mechanical Manufacturing and Automation under the "1+X" Certificate System

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Abstract: In recent years, in order to cultivate the skills of vocational college students, major vocational schools have increased their professional skills training. At present, in the course of mechanical manufacturing and automation, the school mostly adopts the cooperative learning mode. It conducts computer manufacturing skills practice for graduates. At the learning stage, middle school students and company personnel assess them together to improve their professional skills. Under the background of "1+X" certificate, the education of mechanical manufacturing and automation major in vocational colleges continues to realize the "1+X" certificate system, helping students practice knowledge in the process. Based on the "1+X" certificate system, this paper studies how to realize the effective combination of mechanical manufacturing and automation teaching and the "1+X" certification system.

1. Introduction to the pilot project of "1+X" vocational skill grade certificate

All work of the "1+X" vocational skill level certification test should continue to give full play to the degree certification function, lay a solid foundation for students, guide students to take the initiative to obtain multiple types of vocational skill level certification when obtaining degree certification, broaden their job search and innovation skills, and resolve structural job search problems. We will closely combine the pilot "1+X" certificate system with the construction of majors, disciplines, and faculty, promote the organic combination of "1" and "X", and improve the quality of vocational education and student training. According to the experiment, promote the transformation of teachers, textbooks and learning methods; Promote school enterprise cooperation; Build and make good use of the practice base; Research and establish a national "credit bank" for vocational education, and gradually form a complete qualification structure. The main tasks of the test are: First, establish training and assessment institutions. The second is to continue to develop students' professional skills and grade certificates. Third, actively integrate into the modern specialized technical personnel training system. Fourth, actively carry out high-quality vocational training management. Fifth, we will strictly standardize the evaluation of vocational skills and the issuance and management of qualification certificates. Sixth, strive to build a "credit bank" for vocational schools. Seventh, establish sound regulations, monitoring systems and safeguard systems.

2. Training of Mechanical Manufacturing and Automation Major in Vocational Colleges

2.1. Lack of practical ability training for students

Under the quality education, the main purpose of the courses of mechanical manufacturing and automation is basically to complete the course tasks, but the teaching mode in the courses lacks practicality and innovation, overemphasizes the introduction of basic mechanical knowledge, and neglects the training of professional quality.[1] In the process of concept introduction, some teachers of mechanical manufacturing and automation major still adopt the spoon feeding teaching method, and instill the concept content, so that students are often unable to actually contact the mechanical manufacturing and automation major. As the major of machinery manufacturing and automation is an engineering course, it is difficult for teachers to grasp students' attention in the book based courses, thus improving students' comprehensive ability.

2.2. Limitations of teaching mode

In the education of machinery manufacturing and automation, there are limitations in the education of students. When implementing the curriculum, the teachers did not have a good curriculum orientation, the establishment of educational methods, and the innovation of the curriculum. In classroom teaching, teachers often choose simulated classroom teaching, which makes the overall classroom teaching limited. Due to the wide prospect of mechanical manufacturing and automation, it is necessary to ensure that the teaching content meets the needs of personnel training when implementing the curriculum. Therefore, the teacher's classroom teaching is contrary to the practical requirements, which makes the students lack of comprehensive ability training and affects the development of the final learners.

2.3. Uneven investment in education

In the teaching of mechanical manufacturing and automation specialty, because of the unbalanced input of teachers' teaching resources, the situation that students master knowledge points in practical courses is completely different. When the school implements the "1+X" certificate system, teachers lack the introduction of teaching resources, and students do not have enough knowledge of the "1+X" certificate system, which makes students unable to form good learning thinking in practical courses. In the course of mechanical manufacturing and automation, the school needs to put students into mechanical manufacturing technology, but due to the imbalance of educational resources investment, students' actual innovation ability is seriously lacking.[2] The adequacy of educational resources also directly affects students' mastery of knowledge points. Due to the sufficient educational resources, the school can use different teaching methods to realize mechanical manufacturing technology, and use the most advanced marketing concepts to achieve the development and promotion of outlets. However, due to the shortage of educational resources, the efficiency of students' mechanical manufacturing technology will be affected, and students' ability to create ideas will also be suppressed, resulting in low efficiency of the entire classroom.

3. Research on the reform of talent training mode

3.1. Simulated training and strengthening practical teaching

The specialty of mechanical manufacturing and automation is highly practical, which requires students to have a certain sense of self operation, be familiar with knowledge, do a good job in

imitation and practice, and do a good job in practical courses. According to the characteristics of this discipline, our textbooks divide the curriculum into two parts: experimental teaching and comprehensive learning. Practice should be carried out together with knowledge, and joint practice can be linked. In the simulation study, students are required to summarize the problems that occur, guide them to study and solve problems themselves, and let them have a deeper understanding and grasp of the problems. This not only fully arouses their interest in knowledge and closely combines education, but also cultivates their sense of self operation. The task of the overall course is to closely link the students' knowledge of mechanical manufacturing. When the knowledge is reviewed, subject integration shall be carried out, and a week's examination of mechanical manufacturing knowledge shall be used to promote knowledge integration. By introducing the development of machinery, systematically sorting out the knowledge of basic mechanical courses, students can summarize the professional skills, material use, and maintenance of instruments and equipment in the process of mechanical processing, so as to help students understand that the basic knowledge of mechanical equipment is not only understood in the process of basic mechanical learning, but also requires students to master the expansion of basic mechanical knowledge, and how to optimize the entire mechanical processing process. Through continuous practice, cultivate students' professional quality.

3.2. Innovative teaching methods

The cultivation of students' mechanical manufacturing skills is the key training goal under the background of the "1+X" certificate system. Educational institutions in the new era must take the initiative to reform the traditional school teaching model, and according to the advantages of the "1+X" certificate system, they have implemented dual training for students in basic knowledge and practical ability, which not only ensures that students can consolidate their foundation, but also can conduct comprehensive training for students in practical ability. In the process of integration of the "1+X" certificate system, teachers must master the basic abilities of students during the basic education of mechanical manufacturing technology. Therefore, through the development of targeted curriculum implementation plans, students can grasp the basic knowledge more firmly, and at the same time, students' basic thinking mode and cognitive ability are trained. Teachers must also combine the actual teaching content with the technical requirements of the subject according to the curriculum objectives of the mechanical manufacturing and automation specialty and the subject scope of the textbook content. In this stage, teachers should guide children to carry out autonomous learning and improve their previous knowledge methods. In the educational activities, teachers must make a comprehensive design of the curriculum to enable them to have divergent ideas, and pay attention to all aspects of loading and unloading in the teaching of mechanical manufacturing knowledge. In addition, in the course of mechanical manufacturing technology, teachers should also guide students to lead activities, so that they can understand the content of mechanical manufacturing technology and improve their own value at the same time. In the process of examination training, vocational colleges have also created a training method that combines academic education with vocational training, that is, basic knowledge and X ability certification must pass the examination. In order to ensure that students can successfully pass the vocational certification examination, with the support of the company, the vocational technology is broken down into training links or training activity units. Students can learn about the latest technology, new products, new processes and new technologies in the training activities, creating a modern practice platform for them. In order to broaden learners' horizons, we have joined forces with industry standard companies to write international and industry leading technologies and standards into textbooks. Taking advantage of the pilot work of the "1+X" certificate system, the modern management level of teaching in vocational colleges has been improved.

3.3. Use the "1+X" certificate system training mode to improve the teaching system

Under the "1+X" certificate system training mode, teachers must improve classroom teaching and deepen the reform of the classroom teaching system of computer manufacturing and intelligent courses. In the actual teaching, we must establish the "1+X" certificate system, determine the goals of students, and then determine the corresponding talent development model. In the classroom of computer manufacturing and intelligence courses, teachers must integrate theoretical and practical skills training, so that students can complete the transformation of identity in the textbooks. In the process of building the computer manufacturing and intelligent talent model, we must pass the "1+X" certificate system, take career development as the guiding goal, and make students regard teachers as professional guidance. In addition, teachers must also contact with the company, communicate with the company, understand the requirements of the company and the knowledge that must be mastered in actual operation, so as to implement the curriculum pertinently in teaching. Teachers can also communicate with the company to determine specific curriculum implementation plans, design curriculum objectives, teaching methods, assessment methods, etc., and establish a complete curriculum management system. Through the implementation of the "1+X" certificate system, it is a relatively new education method. Through the implementation of comprehensive teaching for children, it can achieve multi angle training of basic knowledge and practical ability, and provide more choices for students. Therefore, by constantly updating and integrating the course content, we can provide students with more core teaching content, so as to give play to the characteristics of refined, practical and targeted professional content under the "1+X" certificate system.

3.4. Strengthened teachers' awareness of undertaking professional skills, knowledge and grade certificates

The core of the implementation of the "1+X certification system" is a full-time school, and the executive force is the first line teachers responsible for full-time teaching activities. They are the core of the effective promotion of vocational classified courses. The implementation of the "1+X" certificate system has put forward new specifications and requirements for both the quality and X ability of teachers in vocational colleges. It is necessary to improve the professional level of the teaching staff, and improve their quality and ability structure in the traditional teaching mode training under the new study environment, so as to enhance their professional level and workplace awareness, and enhance their ability to deal with social practical problems and carry out applied research. It is necessary to strengthen the training of "type teachers" team, adopt various ways such as teachers to carry out X customized training in small and medium-sized enterprises, hire part-time teachers in small and medium-sized enterprises, and take advantage of the internal teacher resources of full-time schools to alleviate the problem of insufficient teachers and students in the implementation of the "1+X" certificate system. We should update the professional appointment norms of teachers in vocational colleges with the times. At present, the content requirements and evaluation contents of education qualification certificates are mostly general requirements for teachers, and there are no special provisions for in-service teachers. Therefore, after the pilot major of "1+X" certificate system is launched, we should cooperate with the development of technical standards for specialized teachers' posts, incorporate the X professional skills of teachers and staff into the requirements of employment period assessment, implement a comprehensive teacher training plan, encourage teachers to carry out practical training, in the teaching of professional skills and technology content, in the integration and innovation of professional knowledge and skills and technology courses, and earnestly understand the content of the "1+X" certificate system, It fundamentally improved the problem that the teaching staff did not have experience in teaching practice projects, and the level of X professional skills of the teaching staff was not high. Multi-disciplinary professional teachers need to have a number of

skills, such as: having the specialized education level to master the "1+X" certificate system, not only can they obtain the X qualification certificate, but also can use standards and specifications to help them with product development, project planning skills, and practical skills; Integrate the enterprise technology theories, standards and practical requirements in X into the skills of integrating knowledge resources of No. 1 Middle School enterprises, as well as the skills of researching and formulating enterprise technology curriculum standards and professional training new plans; Have more abundant enterprise network resources and better information exchange skills, the ability to cooperate with enterprises to develop knowledge resources and resource integration skills. At the same time, it is also necessary to actively build a diversified structure of double qualified teachers and multi qualified teachers, further improve the construction of a mixed double qualified teachers team, promote the perfect combination of vocational colleges and small and medium-sized enterprises, and make up for teachers' professional knowledge and teaching ability.

4. Conclusion

In the context of the implementation of the "1+X" certificate system in China, vocational education must actively implement the talent training strategy with the purpose of cultivating versatile talents. In the context of quality education, vocational colleges adopt the "one+X" certification system in terms of focusing on students' professional knowledge and practical skills, increasing students' learning motivation while providing students with rich resources to ensure that vocational colleges cultivate more professional technical talents for the society. Therefore, the application of the "1+X" certificate system in the machinery manufacturing training is the basis for meeting the current social demand for talents, and is also an important way for vocational colleges to enhance their competitiveness. In the implementation of the "1+X" certificate system, the school requires further exploration of the teaching model and training of students' abilities through the "1+X" certificate system. Teachers must design curriculum content suitable for students' actual level, carry out actual teaching, improve quality and cultivate students' practical skills.

References

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