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Research on the Application of Curriculum Ideology and Politics in CNC Skills Training

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Abstract: With the development of society and the progress of science and technology, CNC technology has been widely used in various industries. CNC skills practical training as an important part of training students' practical ability, not only need to focus on students' technical ability training, but also need to pay attention to students' ideological and moral education. This paper discusses how to cultivate students' ideological and moral cultivation and social responsibility through the education of course ideology and politics by studying the application of course ideology and politics in CNC skills practical training. It is found that the application of curriculum Civics and Politics in CNC skills practical training can effectively cultivate students' sense of social responsibility, professional ethics and innovation consciousness, so that they can become CNC skilled talents with comprehensive quality and good moral quality.

Keywords: Curriculum Civics and Politics, CNC Skills Practical Training, Sense of Social Responsibility, Professional Ethics.

1. Introduction

With the continuous development of science and technology, CNC technology plays an increasingly important role in industrial production. However, only the technical ability is not enough to become an excellent CNC skills personnel, but also need to have a good ideological and moral cultivation and social responsibility[1-3]. As a new educational concept and educational method, curriculum ideology and politics can play an important role in the practical training of CNC skills. The purpose of this paper is to study the application of course ideology and politics in the practical training of CNC skills, and to explore how to cultivate students' ideological and moral cultivation and sense of social responsibility through the education of course ideology and politics[4-5].

2. The Application of Course Ideology in the Practical Training of Numerical Control Skills

2.1. Cultivate Students' Sense of Social Responsibility

CNC skills practical training requires students to have a certain sense of social responsibility and be able to contribute to society. Through the education of course ideology and politics, students can be guided to establish correct social values, so that they can pay attention to social responsibility in the process of practical training, pay attention to social problems and actively participate in solving them[6-8].

1) Emphasize safety awareness: In the process of CNC skills practical training, students should always keep in mind the principle of safety first, abide by the operating procedures, use equipment and tools correctly to ensure the safety of themselves and others. This safety awareness is not only for their own benefit, but also a responsible performance for the lives and properties of others.

2) Emphasize quality consciousness: in the process of practical training, students should focus on product quality, the pursuit of excellence, and constantly improve their skills to ensure that the quality and performance of the product meets the standard requirements, as a way to provide the community with quality products and services.

3) Emphasis on environmental awareness: in the CNC skills training process, students should focus on energy saving and emission reduction, rational use of resources, reduce pollution and damage to the environment, and actively participate in environmental protection activities, in order to build a beautiful home to contribute to their own strength.

4) Emphasize the sense of teamwork: in the process of practical training, students should cultivate the sense of teamwork, learn to cooperate with others to complete the task together, respect the opinions and suggestions of others, cultivate good interpersonal relationships, and contribute to the harmonious development of society.

Through the above methods, students' sense of social responsibility can be cultivated in the process of CNC skills practical training, so that they can become qualified CNC skills personnel, but also have the ability and awareness to contribute to society.

2.2. Cultivate Students' Professional Ethics

As a CNC skilled personnel, in addition to technical ability, also need to have good professional ethics. Through the education of course ideology, students can be guided to establish a correct concept of professional ethics, so that they can focus on teamwork, respect for others, honesty and trustworthiness in the process of practical training, and cultivate talents with all-round development of morality, intelligence, physicality and aesthetics[9].The following methods can be adopted to cultivate students' professional ethics in the process of CNC skills practical training:

1) Establishing correct professional ethics: in the process of practical training, students should be clear about their professional roles and responsibilities, abide by professional ethics, not be lazy, not be perfunctory, respect the professional code of ethics, and treat their work with integrity and dedication.

2) Emphasize professionalism: In the process of practical training, students should pay attention to the learning and improvement of professional knowledge and skills,

continuously improve their professionalism, actively participate in skills competitions and professional certification, and establish the pursuit of excellence in the pursuit of professionalism.

3) Cultivate the sense of responsibility: in the process of practical training, students should establish the sense of responsibility, be responsible for their own work, respect the interests of customers, pay attention to product quality and safety, actively solve problems, and show a sense of responsibility for their work and profession.

Through the above methods, students' professional ethics can be cultivated in the process of CNC skills practical training, so that they can have good professionalism and professional conduct, and lay a solid foundation for their future careers.

2.3. Cultivate Students' Sense of Innovation

The practical training of CNC skills requires students to have the ability to innovate, to be able to solve practical problems and put forward improvement programs. Through the education of course ideology, students can be guided to establish a correct sense of innovation, so that they pay attention to thinking and innovation in the process of practical training, and cultivate talents with the spirit of innovation.Provide space for innovation: Provide students with sufficient practical opportunities, encourage them to freely explore and try new methods and technologies in practical training, and stimulate their innovative potential.

1) Emphasize problem-solving ability: in the practical training, guide students to face problems not only by following the steps, but encourage them to think and propose innovative solutions to cultivate their problem-solving ability.

2) Encourage teamwork: Organize students to participate in team projects, so that they can learn to listen to other people's ideas, inspire innovation, and learn to create solutions together.

3) Provide innovative resources: Provide students with good learning resources and experimental equipment, encourage them to utilize these resources for experimentation and innovation, and stimulate their creativity.

4) Cultivate critical thinking: Encourage students to keep questioning and thinking about existing technologies and methods to cultivate their critical thinking and thus stimulate their sense of innovation.

Through the above methods, students' innovative consciousness can be cultivated in the practical training of CNC skills, so that they can have the ability to think independently, try and innovate, and be prepared for their future career development.

3. The Implementation Method of Course Politics in the Practical Training of Numerical Control Skills

3.1. Teacher Guidance

Teachers are the main implementers of course ideology and politics, and they should pay attention to the ideological and moral education of students in the process of practical training. By explaining the moral requirements in the process of practical training, case analysis, discussion and other ways, they can help students establish correct ideological and moral concepts, cultivate their sense of social responsibility and professional ethics, and improve their comprehensive quality and moral quality in the practical training of CNC skills. Teacher guidance mainly contains the following parts:

1) Preparation before class: Teachers can prepare some cases, stories or videos related to ideology and politics in advance, which can be used to trigger students' thinking about morality, professional ethics and other issues.

2) Explaining ethical requirements: Teachers can explain the ethical requirements in practical operation, such as safe operation, environmental protection, honesty and trustworthiness, etc., to guide students to set up correct values and ethical concepts in the course of practical training.

3) Case analysis: Teachers can choose some cases related to the content of practical training and let students analyze the moral problems in the cases and put forward solutions. Through case analysis, students are guided to think about the complexity and importance of moral issues.

4) Discussions and exchanges: Teachers can organize group discussions or class exchanges for students to share their views and experiences and promote interaction and collision of ideas among students.

5) Case guidance: Teachers can conduct one-on-one case guidance with students to provide guidance and answers to the ethical problems encountered by students in the process of practical training and help them solve practical problems.

6) Motivation and recognition: Teachers can give students positive motivation and recognition in time, encouraging them to show good moral qualities and professional ethics in the process of practical training.

3.2. Practical Teaching

CNC skills practical training is a practical course, students will encounter a variety of practical problems in the process of practical training. Teachers can organize practical teaching to let students experience and solve problems, so as to cultivate their practical operation ability and problem solving ability. The practical teaching method can effectively integrate the course ideology and politics into the practical training of CNC skills, and promote the overall development of students' ideological and moral cultivation and professionalism. At the same time, it can also enable students to experience the importance of morality and professional ethics in practice and improve their moral consciousness and moral level. Practical teaching mainly consists of the following parts:

1) Designing suitable practical training courses: Teachers can design a series of practical training courses related to Civics and Politics according to the actual situation, including the education of morality and professional ethics, education of social responsibility, and cultivation of innovative consciousness. These courses can be taught through lectures, discussions, case studies, practical operations and so on.

2) Guiding students to practical operation: teachers can guide students to carry out actual CNC skill operation, and cultivate students' professionalism and practical operation ability through practical operation. In the process of practicing, teachers can give students timely guidance and feedback to help them correct mistakes and improve their skills.

3) Case analysis and discussion: Teachers can choose some cases related to the content of practical training for students to analyze and discuss. Through case analysis, students can learn about the ethical problems and professional ethical requirements they may encounter in practical operation, and further clarify their professional responsibilities and ethical bottom line.

4) Case guidance and counseling: Teachers can conduct one-on-one case guidance and counseling with students to answer and guide the ethical problems and confusions encountered by students during practical training. Through case guidance, teachers can help students solve practical problems and guide them to establish correct values and moral concepts.

5) Practical Achievement Display and Evaluation: Teachers can organize students' practical achievement display to let students show their achievements and gains in practical training. At the same time, teachers can evaluate students' practical performance, including the evaluation of skill level, professionalism, moral quality and other aspects, in order to promote students' further improvement and development.

3.3. Curriculum Design

In the course design of CNC skills practical training, some elements of ideology and politics can be integrated. For example, some requirements related to social responsibility and professional ethics are set in the practical training program, so that students can think and experience in the actual operation. In the practical training of CNC skills, the course Civics can be designed in the following ways:

1) Curriculum objective setting: To clarify the objectives of course Civics, including cultivating students' moral consciousness, professional moral literacy and sense of social responsibility. At the same time, it should also be combined with the technical objectives of CNC skills training in order to improve students' comprehensive quality and vocational ability.

2) Selection of course content: Choose contents related to ethics and professional ethics, such as integrity, responsibility, fairness, teamwork, etc. Through teaching resources such as textbooks, cases and examples, students are guided to think and discuss issues related to these contents.

3) Choice of teaching methods: Adopt a variety of teaching methods, such as case analysis, group discussion, role-playing, etc., to stimulate students' thinking and participation. Meanwhile, practical teaching should also be emphasized, so that students can experience and feel the importance of ethics and professional ethics through practical operations and experiments.

4) Design of evaluation methods: Design diversified evaluation methods, including skill evaluation, moral evaluation and professionalism evaluation. Evaluate and give feedback on students' moral and ethical cultivation and professional quality through the display of practical training results, case analysis and comprehensive evaluation.

5) Teacher-student interaction and guidance: Teachers should actively interact with students and guide them to think about and discuss issues related to ethics and professionalism. Through case guidance, explanations and discussions, students will be helped to understand and apply the concepts and principles of course ethics.

3.4. Evaluation Mechanism

Evaluation is an important part of course civics, which can be used to assess students' ideological and moral cultivation in the course of practical training by setting evaluation indicators related to civics, such as the evaluation of moral character, professional ethics, teamwork ability and other aspects. In the CNC skills practical training, the following evaluation mechanisms can be designed to assess the students' performance of course ideology and politics:

1) Skill evaluation: Assess students' performance and achievement in CNC skill practical training, including operation skills, technical ability and practical application ability. This is the main evaluation index of CNC skills practical training, which can be assessed through practical operation, experiment report, project results display and so on.

2) Moral evaluation: Assess students' moral performance and moral consciousness in the process of practical training. Students' moral literacy and moral cultivation can be assessed by observing their demeanor, attitudes and words and actions. Students' ability to think and judge moral issues can also be assessed through group discussions and case studies.

3) Evaluation of professionalism: Assessing students' professionalism and ethics in the process of practical training. Students' professionalism can be assessed by observing their professional attitude, professional behavior and sense of professional responsibility. It can also assess students' knowledge of career development and planning ability through personal statement, career planning and career development.

4) Comprehensive Evaluation: Comprehensive evaluation and comprehensive grades are given to students by taking into account their skill performance, ethical performance and professionalism. A combination of quantitative and qualitative evaluation can be used to comprehensively assess students' comprehensive quality and vocational ability by taking multiple evaluation indicators into account.

4. Conclusion

The application of course ideology and politics in CNC skills practical training is of great significance for cultivating students' ideological and moral cultivation and sense of social responsibility. Through reasonable implementation methods, it can cultivate students' sense of social responsibility, professional ethics and innovative consciousness, so that they can become CNC skilled talents with comprehensive quality and good moral quality. Therefore, the education of course ideology and politics should be emphasized in the practical training of CNC skills, so as to contribute to the overall development of students and social development.

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