Electronic Technology Training Teaching

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ABSTRACT: Electronic technology practice teaching is a very important practical course of electronic information specialty in Colleges and universities, and it is an important part of engineering training. With society to practice innovation talents demand more and more high, we are forced to strengthening the cultivation of innovative practice link teaching in the training course, this paper mainly discuss the reform of the teaching method, in on the basis of traditional teaching methods change the teaching idea, guide teaching method to guide students through the access to information to personalize the design, to encourage students to self-test problem solving, train students to integrate the training project design innovation ability.

Keywords: electronic technology teaching reform and innovation ability project integration

1. The traditional teaching of electronic technology training

"Electronic technology training" the main contents include the safe, commonly used electronic components, welding technology, printed circuit boards, electronic assembly process, modulation and detection technology, electronic simulation technology. General electronic technology training projects mainly in the Universities of manual assembly of small electronic products, students under the guidance of teachers, complete electronics assembly, welding, testing, maintenance and other work.

Traditional electronic technology training for teaching the theory of teaching services, often learning theoretical knowledge through practical activities to verify the theory of knowledge, in the training process, the student training purposes, training content, test components and even experimental methods steps are specified in advance by the teacher of this teaching method ignores the creative ability of students.

2. The goal and principle of electronic technology training teaching reform

Determine the electron technology training objectives of the teaching
reform, should be in the working process oriented curriculum construction, advancing with the times to write integration design can truly meet the goals of vocational ability of curriculum content, to enable students to in the process of learning through the teacher's guidance and teaching the necessary theory knowledge and operating skills mastery. On the basis of market research and professional ability, the selection of the representative training project has as a textbook project, and through each textbook projects integrate. At the same time, into the circuit board design engineers job skills requirements, so that students in the circuit board to engage in the work of the knowledge and skills.

The aim of school education is mainly with the students employment, the cultivation of students' comprehensive production capacity, at present in Colleges and universities of our country culture set professional goal and the direction of reform should be on the basis of quality education, all kinds of professional and technical personnel and modern workers must be equipped with the basic ability training, can meet the enterprise's needs and to promote the employment of students, not a waste of labor.

Three principles to determine the teaching reform of electronic technology training:

The first training course based on professional skills, provide support platform for subsequent professional courses; Second: the main line of this course, the appropriate integration of relevant professional courses: Third: highlight the practical skills training, to provide support for the professional personnel training.

3. The direction of the teaching reform of electronic technology training and reform ideas. Modern education in the management of the University of personalization and education system, the school running policy emphasizes the service for the purpose of employment oriented. In our country recent education reform and development, a service for the purpose of the employment orientation of educational policy is more and more obvious, stressed the service to promote employment, to strengthen the employment service, pointed out the basic direction of the reform and development of education, so we should to the objective and direction of education oriented, clear the aim of employment of skills training.

Through the collection of reference documents, to understand the electronic information professional electronic technology training teaching reform. Reform of new educational methods and by applying to teaching situation, by the students before and after the reform of education teaching learning and learning outcomes of different to verify the reform of rationality and correctness, increase the credibility of the reliability.

4. The reform of the teaching method of electronic technology training

In line with the cognitive rules of students, under the premise of following the teaching rules, according to the difficulty of the course and characteristics, the organic combination of teaching methods, education pay attention to teach students in accordance with their aptitude, will combine the method of rational
use of the teaching process to. The following six methods of teaching is not a separate choice, the various methods are complementary; it should be an organic combination of daily teaching activities, to get the best effect of curriculum reform.

4.1 Project teaching method
Design and manufacture of electronic process practice teaching is the combination of theory and practice teaching, each teaching program are as independent completely, for each project teaching, from simple to difficult to teach, students learn targeted, easy to understand, between different for each experimental project is in parallel with the subsumption relations, to enable students to constantly reviewing the old, each a separate projects through to together to form an integrated system concept, in order to better faster master knowledge of the theory and practice, to achieve good teaching effect.

4.2 Heuristic guidance
On the educational philosophy, in the process of teaching, teachers play a leading role, so it should be based on teachers, first of all through the guidance of the written text produces, objectives and tasks, students' development of associated thinking, learn to draw inferences about other cases from one instance, achieve the effect of innovation, students' development of associated thinking, innovation is key electronic technology development, students cultivate the spirit of innovation is very important. Under the guidance of teachers, while learning, experience complete finished product of electronic technology training teaching fun, students learn how to manufacture, circuit principle of curiosity, interest is the best teacher for the students to learn. So, to stimulate students' interest in learning, is a good teacher should have. Because the training course is limited, the training course should be based on the practice process, in the theoretical education should be retained, to give students a room to explore in-depth study.

Electronic process practice teaching is a process of learning theory to explain key and difficult to manufacture products, draw the conclusion, for some of the projects, can consider inspire and guide teaching, theory not by teachers completely analysis to explain, but by their own inquiry. In the process of school teaching is often faced with the problem of poor students, learning ability is poor, especially in science and engineering classes in the majority of boys, taking into account the theoretical knowledge of students is difficult to understand, interest is not high. But generally male students have strong hands-on ability, curiosity, for such characteristics, we can for the heuristic teaching, learning theory, DIY products, put forward problems, solve the problem, for in-depth knowledge, do not need to explain, by the students in the process of making to discover for themselves: why is this so? How to achieve the goal effect? Again with doubt initiative to read the books, web search, self-theory knowledge and knowledge of the extent of must be good in the teacher on the podium narrative explanation, greatly enhance the learning effect, but also help to develop students to discover for themselves and solve the problems of learning habits.
4.3 Interactive guidance law

Clever design of classroom teaching, causing students to think actively, with the issue of the end of the classroom teaching, learning task extends to the outside of the classroom, extending to the outside of the campus, students to develop in a planned, purposeful, step by step to research and explore the learning habits.

In the process of training, to stand in the perspective of learning to think, do a good job in the role model. For example: students in learning a project after the principle of knowledge, although the theory has a certain understanding, but in the actual operation of the process, but do not know how to do it. At this time the teacher should guide the operation of the model, is a new understanding of the students to enhance the enthusiasm of the students, the courage to begin operation. Some training projects in the face, small problems can have a big effect, such as in the corridor voice activated in experimental circuit, due to training students without inspection of components is good or bad, the quality of photosensitive resistance directly affect the success or failure of the circuit board, teachers should explain the notes to avoid students in small problems affect the training results.

4.4 Independent testing method

Electronic process practice teaching in the production process, many students and not a success, examination training results, incorrect in practical operation skills of operation demonstration, to circuits are not normal phenomenon, the responsibility of teachers is to help students find out the mistakes, but to guide students to solve the concrete problems of positive thinking, analyses the existent problem and the reason, while not directly tell the reason, Tips for students to find their own way to solve the problem, to find out the error, repair a circuit board to get more knowledge and even more than the learning time. So the passive learning into active learning, let students under teacher's instruction, can exert their potential, to stimulate the students' enthusiasm and motivation in learning, can be bold and independent completion of training project, improve the quality and effect of practical teaching, developing students' creative thinking.

4.5 Group management

Now the present situation of education in China, the number is too large, teachers have no way to have enough time and energy to pay close attention to every student, in the experimental process, not personally for each individual good hands-on guidance by group management method, divided the students into independent groups, about each group of four people, arrange learning outstanding achievement of students management team, solve crew of small problems, small head of the candidates are not fixed, appropriate to hold small competitions, by members in ability as, competition will progress. Leader solve students for some simple problems is helpful to reduce teacher workload, also makes the students discuss self-study and solve the problem that cannot be a leader reported to teachers, teachers will concentration, the same problem of merging, unified explanation, saves the teaching time, can also grasp the majority of students learning problems.
4.6 Open second classes, open laboratory [4]

Open laboratory is one of the ways to encourage students to study independently, to create a good environment and opportunities for the development of students' personality. On the basis of the completion of the basic teaching tasks, to encourage students to carry out extra-curricular electronic creation, design, production of students interested in their own small invention, small production, you can fully mobilize their own independent, innovative awareness. College can run circuit board design competition, the curriculum design of the production of small inventions, small production set up, by the college teachers and students to select the most innovative works of creativity.

Through the creation, design, students will learn the knowledge to be analysis and understanding, comprehensive utilization, not only to widen the students thinking, to consolidate the theoretical knowledge, also exercise the students' creativity and practical ability, more important to the cultivation of students' innovative ability of implement, cultivation of innovation ability of students really master theoretical knowledge to promote meaningful.

5. Electronic technology training teaching reform after the change of teaching effect

Using new teaching methods of learning of students, the understanding of the teaching content more than the old method of education of students, in the process of making a product, be able to check their mistakes, in the production process, your own thoughts and ideas, often ask questions to the teacher, active thinking, work flexible, while the use of the old methods of teaching the students, rely on the help of the teacher, no systematic thoughts and ideas of learning content low interest, Rigid ways of thinking, just in order to cope with the task of making learning, in the learning process that boring theory knowledge, difficulty concentrating, to learn to understand, to make products although interest is high, but in the failure process not to learn from the experience, and loss of confidence, slowly feel difficult to learn, no, because the teacher is not enough attention, not timely found the student, after that students can't keep learning progress is difficult to remedy. If the reform of teaching methods, a small group leader to help greatly reduce the workload of teachers, but also exercise the students.

Electronic technology practice teaching is a very important practical course of electronic information specialty in Colleges and universities, and it is an important part of engineering training. Nowadays, the demand for talents in the society is more and more high. The teaching reform of electronic technology course should strengthen the teaching and training of practical links, improve students' ability of practice, the key is to strengthen students' engineering quality and innovation ability, and cultivate innovative talents.

References