The Second Class Study of Electronic Design Contest for College Students

Bai Qing He and Zi Min Wang

Abstract: The electronic design competition of college students is one of the effective tests of students' professional knowledge, which plays an active role in improving the overall quality of students and cultivating practical application ability. Effective development of the second classroom to play a positive role in training applied talents, through the combination of competition and the second classroom to promote students' sense of innovation, innovation, problem discovery, problem analysis, problem-solving ability.

Keywords: electronic design competition; second class; innovation ability

The National Student Electronic Design Contest is one of the student science competitions advocated by the Ministry of Education. It is aimed at promoting the mass science and technology activities of college students. The aim is to promote the reform of the curriculum system and curriculum content of information and electronic subjects in colleges and universities, which is helpful to the implementation of higher education Quality education, training students to practice the creative sense of innovation and basic ability, teamwork of humanistic spirit and theory with the actual style of study; help students to practice the quality of training, improve students for practical problems of electronic design production capacity; Attract and encourage the majority of young students to participate in extracurricular scientific and technological activities for the outstanding talent to come to the fore to create conditions.

College personnel training program is particularly emphasized that the development of moral, intellectual and aesthetic development, a solid theoretical foundation, high project quality, practical ability, can engage in electronic-related design, research and development, system operation, equipment management and maintenance, engineering and technical management Application of senior specialized personnel. According to the

Nanchang Institute of Technology, Nanchang, Jiangxi 330044, China
308809980@qq.com, 86035262@qq.com
actual situation of the college, we try to develop the electronic information class second classroom implementation steps.

The second classroom teacher configuration: As a result of the characteristics of private colleges and universities, we selected the old and middle three groups, streamlining teachers, to practice practical ability as the main selection criteria, the experimental center is responsible for the implementation of the steps. Teachers are required to divide and direct the relevant information and make preparations before the competition, according to the previous competition topics, such as electronic equipment, power supply, communication and information processing, control automation and other categories. Develop a training plan, arrange the instructor on duty, make a good record of the guidance process, and make a summary, and immediately deal with the problem. To promote teachers' love and dedication of the moral character, give full play to the spirit of selfless dedication of teachers, teachers in the evaluation of the title, title assessment given priority, to mobilize the enthusiasm of teachers. On the other hand training for the practice of instructors, while the establishment of the electronic science and technology innovation association, some daily affairs by the student organization to deal with their own, the association has rules and regulations, a flexible management mechanism, the formation of high grade with low grade learning atmosphere Help, with "the form of the healthy development of the association. The college provides practice sites for teachers and students and is equipped with a common laboratory instrument (computer, digital oscilloscope, multimeter, power supply, single-chip test box), equipped with two training laboratories and open all laboratories, providing a basis for the development of the second classroom.

The second classroom to students as the main body: the second class is the master of the students, electronic science and technology innovation association to play an active role in organizing. From the beginning of the new military training, the association will carry out lectures, works show, association WeChat public number, group public number publicity, so that new students into the school after the understanding of the role of electronic design competition and recruit new work. To the Association as the carrier, after the organization members to carry out daily training, in the training room design simple works, while the school electronic design competition to allow new students to further understand the competition. Strengthen the association between the colleges and universities, the exchange within the association, through the exchange of students to grow horizons, see the lack of learning the strengths of others. Association rules and regulations to restrict the daily behavior of members, so that students can stick to it, to self-management, self-development, to achieve the role of ownership.

To develop the second classroom content: In order to allow students to complete the design of a work in four days and three nights, to have a variety of knowledge, the second classroom teaching content is very critical. There
are many kinds of topics in the electronic competition, involving a wide range of comprehensive application of strong. From the choice of students after school counseling book also make efforts, not only focus on theoretical analysis, to pay special attention to content analysis, technical parameters of the requirements must be carefully reviewed, buy. Instructor to explain the content is not only the knowledge of electronic technology, as well as automatic control, Internet of things sensors, computer programming, motor drag and other related knowledge. So the guidance of teachers to co-ordinate, reasonable planning, the use of rest days, evening study, summer vacation from the most basic safety of electricity, electronic device identification, welding technology, simple circuit calculation and design, the use of electronic equipment, PCB software, PCB board, Kill simulation, single-chip programming, EDA technology running, computer C language and other content to start, but also take into account the contents of other disciplines mentioned above, the instructor to spend a lot of time to design content. From the training of the content design can be divided into three layers: First, the basic study: the use of the weekend, evening classes to carry out daily training. The main body of our institute is a low grade student, the annual provincial race in May, the biennial national electronic design competition, the competition when a large number of professional courses have not yet started classes, then this stage is mainly focused on single-chip programming, PCB software, DEA Circuit design, welding assembly and other basic knowledge, the use of watching video, seniors lectures, seniors guidance, teachers focus on teaching and other forms of teaching. Second, the College held a competition: the annual college are held PCB drawing contest, 7.5 hours of electronic design competition, to the school competition to select to participate in the provincial race, the country's players. Through the competition to find the gap, find enough, so that they slowly adapt to the rules of the game, the atmosphere of the competition. Third, the concentration of training: arranged in the annual summer vacation, this stage is happy and hard coexistence of time, happy and teammates can "fight side by side", forged a deep friendship, while the "stove" called Nanchang City, summer morning Body sweating, steaming! To overcome the psychological and physical double test. The main task of this stage is based on their own expertise, choose the direction of research, step by step, there are ways to strengthen the training, targeted completion of the past year Zhenti training. After the completion of the work to organize the defense team to reply, so that each player to express their own point of view, discuss their own work hardware, software production steps, as well as the function of the work, the defense team to score and sum up the work.

Electronic design competition on the role of the second class of electronic information class: electronic design competition on the second classroom to achieve the teaching principles of individualized teaching, teaching and learning in the second classroom, from heaven, geography of the constraints, anytime, anywhere to teach And the students in the equality and harmony of the atmosphere to be sure, to maximize the teaching and learning;
electronic design competition to maximize the potential of the students to tap, more conducive to cultivating students' ability to innovate, the achievement of the students to obtain the sense of presence and A sense of accomplishment. Students in the course of the competition to learn the independent thinking, find the problem, analyze the problem, the ability to solve the problem, and slowly grow up, this way also greatly exert students' expertise, personality can show more, self-promotion, thus driving around The design of electronic design competition to play a positive role in the overall quality of students, due to the second class of freedom, we can be out of the teaching plan, through the students themselves to accept the way of teaching, to cultivate the application of talent to provide a favorable protection. In addition to professional knowledge of learning, students also get organizational skills, language skills, social skills, ability to do things have been improved.

The effective development of the second class is of great significance. Colleges and universities are engaged in the characteristics of education, quality legislation school, the quality of strong schools, which has a characteristic is scientific, efficient, standardized and pragmatic to carry out the activities of the second classroom. The second class is the first classroom education supplement, because the first classroom has a fixed teaching plan, lesson plans, teaching materials, must be in accordance with the personnel training program to educate people, teachers with a fixed idea to teach, students passively to accept high-intensity specialization Knowledge, students are coping to learn, so that learning lost the original fun, affecting the first classroom teaching effect. And the second classroom is the essence of the first classroom extension and expansion, the content is rich and colorful, the way can also be varied, the second classroom content is more visual, characteristic, fun, humane, so that students Easier to accept. The second class to promote the cultivation of innovative talents, the country is in a period of innovation and entrepreneurship, innovation and its methods, innovative techniques, innovative education in the first place, requires colleges and universities to cultivate a strong knowledge, practical hands Ability, innovative thinking of talent. Teachers in the usual training, the problem thrown to the students, but to tell them the point of entry, so that students can play their own expertise, freedom to play their own imagination, independent thinking, problem solving, training students awareness of innovation, and electronic design competition no fixed answer, We can freely to play, "the road through Rome," the final design work can meet the requirements of the subject can. This open mind to Rongnai big competition, so that students opened up a mind, opened the channel for innovation.

In the era of rapid development of science and technology, under the situation of higher education popularization, colleges and universities as the main resort of talent cultivation, application type, innovative talents is the needs of mass market, the second classroom for such personnel training provides a platform. Colleges and universities should pay attention to the role of the second classroom, play to promote the game to promote the role of
competition, that is, attention to the teaching of traditional knowledge, but also to strengthen the second classroom support and construction. To the electronic competition as the starting point, to promote the teaching reform in many colleges and universities, especially in the second classroom we have to try more, mainly in the practical practice of students, innovation and entrepreneurship, engineering practice, teamwork and other aspects of the advantages of, Can improve the combat effectiveness of students in the market, we can carry out reform. Electronic design competition and the second classroom to fully integrate, in the process of educating people we will continue to explore.


