

Construction and Research of Electronic Design Competition Training System under the Fine Management

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Keywords: Fine management; Electronic design competition; Training system construction

Abstract. Based on the experiment, the students as the main body, inquiry is the form, competition is the purpose, Combination the National Undergraduate Electronic Design Contest with the Xijing University electronic design contest, "electronic design contest student recruitment organization", "electronic design contest guidance team", "electronic design contest ladder training", "electronic design contest best construction with the optimization " four in one scientific and effective training system is constructed to complete the electronic design contest training system process reengineering based on fine management, and do the preparatory work for the electronic design contest.

Introduction

Electronic design contest is a mass oriented scientific and technological activities for college students, the contest began in 1994, the provincial tournament is hold in even years, the national tournament is hold in odd years, it has been successfully held 22 sessions. Professional knowledge in electronic design contest involves extensive cross between multiple disciplines of electronic and electrical, mechanical, computer etc. which requires students to master the analysis and design of hardware circuit, but also have the programming ability. Through the electronic design competition and ultimately foster collaboration ability and innovation ability of students, improve students' ability to solve practical problems of electronic design, and promote the students of electrical courses learning enthusiasm, achieve the purpose and effect to promote teaching. It can be seen from teams each year, the scale is increasing, on one hand, the influence and the popularity of electronic design contest in the college and university students is increasing, on the other hand, each division is actively organized. How to make full use of the existing conditions of the school, to further improve the students' level of competition to achieve better results, systematic and in-depth study the construction of electronic design competition and training system to achieve a multiplier effect of training is of great significance.

The Position of Electronic Design Competition in our School

Xijing University always adhere to the guiding ideology of the personality education and "Science + art", focus on the all-round development of knowledge, ability and quality, pay attention to general education and professional education "width" and "thickness" and "depth" coordination. To cultivate the people as the fulcrum, and actively carry out the activities of college students science popularization and application of innovative activities, students can solve practical problems through the discipline contest, where the theoretical knowledge can be converted into practical ability. Stimulate the enthusiasm of students, at the same time, have a clear understanding of the students' professional learning goals, while training vocational skills. The school attaches great importance to cultivating students' learning ability, practical ability and innovation ability, the characteristics of Applied Talents " both outstanding professional foundation and application ability ", constantly increasing input, improving the experimental conditions, support and encourage academic competition. Among them, the electronic design contest for college students is one of the key events in our school. To cultivate students' innovation ability, team spirit, fighting spirit through competition, to promote the teaching pattern is "student-centered, teacher led" teaching objective,

which is conducive to the students' basic skills and abilities, to cultivate top-notch innovative talents.

Research on the Training System of Electronic Design Competition under the Fine Management

According to the National Undergraduate Electronic Design Contest and the actual development situation of the Xijing University electronic design contest , construction of electronic design contest training system is studied, process reengineering of electronic design contest training system based on fine management is realized, and the system is applied to the electronic design contest training actual work, then tracking the training effects to adjust the system and improve the level of training and training quality to provide a complete set of training system for electronic design contest. The route to be taken is shown in figure 1.

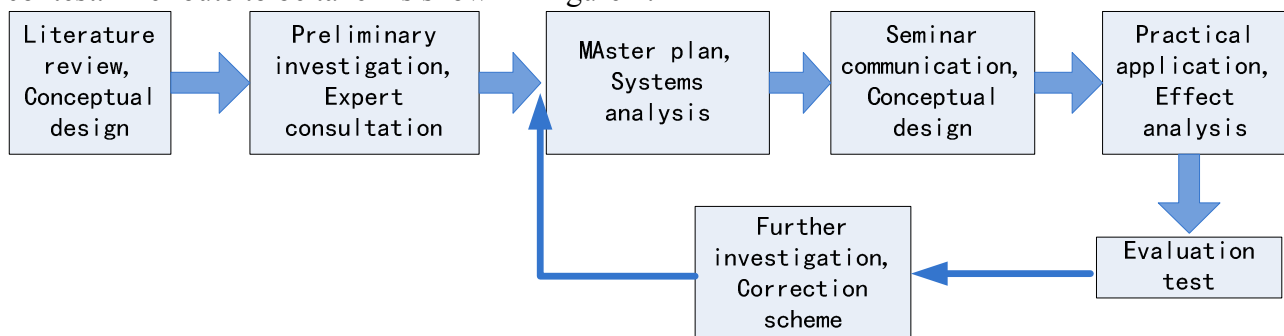


Figure 1. Research Roadmap

It is a closed loop. It is applied in the electronic design contest training system in practice, and completing the evaluation test. According to the feedback information to correct the system and continuously adjust the scheme to obtain the best training effect. The main contents of the study are as follows.

Organization and Improvement of Student Recruitment. Recruit students in batches from low, medium and high grade in proportion to really interested in electronic design, and through training to establish a scientific and effective mechanism for elimination and election. Consider theoretical courses, practical courses, the usual training achievement, test scores and interview situation to choose the relative excellent student team to participate in electronic design contest to ensure the students with all-round knowledge structure and ability which overcomes shortcomings of temporary selection, improving the overall level of the students and outstanding students spontaneously.

The Construction and Improvement of the Electronic Design Competition Team. Xijing University set up a electronic competition instructor team including 9 people and the new and old teachers alternately. The scale and structure of the team is researched and analyzed to establish a stable, reasonable structure, optimizing the combination of teacher team to achieve the best effect of guidance. Due to the characteristics of long time span and strong work intensity, the training work of the electronic design competition is much stronger than that of the daily teaching work. Therefore, we should improve the teaching team. On the one hand, reduce the amount of hours of the semester teachers competition requirements appropriately, let the teacher team have enough energy to participate in the training work; on the other hand, we should maintain the relative stability of teachers team to summarize experience and lessons in the training organization and the competition process of the electronic design competition, accumulate the training idea and system characteristics that can provide an important guarantee for achieving good effect of training and competition results, also can outstanding teachers stability.

Research and Design of Ladder Training Method. Combined with the actual situation of school resources, taking into account the overall level of the students, the ladder training mode is put forward, and the main training questions are designed. Undergraduate Electronic Design

Contest has such advantages as strong practicability, high integration which refers to many electronic information specialty courses. Check students' creative thinking and comprehensive use of knowledge ability. The competition guidance team should carry on the analysis of the previous test questions, combine the actual situation of the school resources, and consider the overall level of the students to determine the main training questions, highlight the training content ladder.

The Construction and Optimization of "One Teacher, One Excellent" Course. Through the test of electronic design contest training, strengthen the features and advantages of the established courses. Further improve and optimize the "one teacher and one excellent" course. Pay attention to the improvement of teaching and the reasonable application in teaching.

Combined with the characteristics that change every year of electronic design contest, making best construction content optimization method and improvement measures. After the end of the electronic design competition, the competition information will be added timely to update the content of the platform, and constantly enrich the curriculum resources to ensure the timeliness of information. A complete and systematic reference material including the simulation operation, the practice process and the design report template of the electronic competition is provided for students through the theoretical knowledge of the platform.

Main Features of Electronic Design Competition Training System

The main features of the electronic design competition training system are reflected in the following points:

(1) Students' spontaneity: taking full account of the characteristics of students and students' interests, overcome the shortcomings of the temporary selection, improve the overall level of the students.

(2) The ladder of training content: combining with the degree of mastery, learning methods, difficulties encountered in the course of learning, and so on, the design of the training content with ladder, in line with the actual situation of the majority of students.

(3) The effectiveness of a teacher a lesson: according to the characteristics of the students every year changes, competition training content unchanged, improve the optimization of a division of an excellent course, has the characteristics of real-time, convenient learning etc.

Summary

Through the establishment of the electronic design competition student recruitment organization, electronic design competition guidance team, electronic design competition training content, electronic design contest "one teacher one excellent" course to build and perfect the training system of electronic design competition, and to realize the process reengineering of the electronic design competition system. On the one hand, to provide a complete set of clear training ideas and processes for the annual electronic design competition training and avoid the preparatory work in order to have more time to study. On the other hand, the electronic design contest training system is copied, when the students in our school have changed and the instructor team slightly changes, it can guide the student to enter the competition state as soon as possible and help teachers in a relatively short period of time and to undertake the main task of a good school of electronic design contest.

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