

# The Second Classroom of “One Festival One Platform” Helps to Cultivate Applied Talents

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**Abstract:** This paper expounds that relying on the “Mathematics Culture Festival”, mathematics culture is integrated into education and teaching to help the growth of young teachers and the cultivation of applied talents, and relying on the “professional association” platform, integrate application innovation into skill training, broaden professional knowledge, improve professional skills, promote the construction of study style and improve the effectiveness of education. This paper summarizes the achievements, and provides a reference for the second classroom to help the cultivation of applied talents.

**Keywords:** Mathematics Culture Festival; Professional Associations; Second Class; Training of Applied talents

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The cultivation of applied talents is an important reform in the development of higher education in the new era. It is an inevitable and rational choice for higher education to adapt to the social development. The second classroom, as an effective extension and supplement of the first classroom, is an effective way to implement applied innovation education and an important support and powerful guarantee for cultivating students’ innovative quality <sup>[1]</sup>. Through the second classroom, colleges and universities can help students absorb a wider range of extracurricular knowledge and broaden their horizons, so that students can gain more <sup>[2]</sup>. Taking the school of mathematics and statistics of Zhaoqing University as an example, this paper expounds that the second classroom helps to cultivate applied talents.

## 1. Introduction

In recent years, the school of mathematics and statistics of Zhaoqing University has been committed to the cultivation of innovative and applied talents. In order to broaden the second classroom and help the cultivation of applied talents, it has focused on the construction of “one festival and one platform”. The “one festival” is the mathematical culture festival, and the “one platform” is the platform of five professional skills associations, which are mathematical modeling association, mathematics competition association, mathematics education association, program and design association, association for financial mathematics and statistics. The main contents include that skill training, discipline competition, innovation and entrepreneurship projects, academic lectures, academic seminars, scientific and technological innovation, professional services, etc. Each association is equipped with professional instructors with high academic qualifications and professional titles. Their professional level is high and their professional skills are strong. They can provide guidance for the professional development of the association and give accurate guidance to the daily training and activities of the professional association. Professional associations provide students with extracurricular learning and practice platforms. Through professional skill training, discipline competition and educational practice, they greatly stimulate students’ innovative spirit and cultivate students’ comprehensive application ability. They are the innovation and supplement of the education mechanism of colleges and universities <sup>[3]</sup>.

The school of mathematics and statistics has formulated a training program for applied talents around the requirements of quality engineering and the school’s school running philosophy. It organizes students to participate in various subject contest every year and has achieved excellent results. The main subject contests include that college students’ mathematical modeling contest, mathematical contest, Guangdong Hong Kong Macao Dawan District college students’ financial modeling contest, Guangdong normal students’ teaching skills contest, and the market survey and analysis contest, etc.

## 2. Main working practices

### 2.1 Rely on “one festival” to integrate mathematics culture into education and teaching

In order to promote the implementation of the training of applied talents, carry forward the spirit of mathematical science and culture, further strengthen students’ understanding of various fields of mathematics, stimulate students’ enthusiasm for learning and loving majors courses, and improve students’ professional quality, in 2013, the school of mathematics and statistics held the first mathematical culture festival, which lasted for one academic year, and then held once every academic year. The purpose of the mathematics culture festival is to create a strong atmosphere of mathematics culture on campus, so that students can further understand

mathematics, master mathematics and applied mathematics, improve the mathematical cultural literacy of teachers and students, improve the ability of mathematical application, and promote the formation of good teaching style, study style and school spirit.

### **2.1.1 Help young teachers grow**

From September 2019 to now, there are 16 young teachers are introduced in the school of mathematics and statistics. In order to help young teachers improve their professional quality and quickly stand on the podium, under the overall planning of the school, the mathematical culture festival has innovatively set up mathematical culture discussion, teacher classroom teaching competition, open classes for young teachers, academic reports of tutors of professional associations, etc. It organized and carried out the “tutorial system for young teachers” and “double training” mechanism, carried out a series of discussion activities for young teachers, and organized and supervised lectures, class evaluation, teaching plan selection and other activities, which effectively promoted the growth of young teachers.<sup>[1]</sup>

### **2.1.2 Help students edify mathematics culture**

Focusing on the fundamental task of Building Morality and cultivating people, and following the laws of Ideological and political work, teaching and educating people and the requirements of students’ growth, the school of mathematics and statistics has set up learning experience exchange meetings, postgraduate entrance examination (or civil service examination) mobilization meetings and experience exchange meetings, various professional discipline competitions, normal skill series activities, etc. Through a series of activities in the mathematics culture festival, it effectively strengthens the cultivation of students’ practical ability and improves students’ employment core competitiveness and practical operation ability.

## **2.2 Rely on “one platform” to integrate application innovation into education and teaching**

The five professional skill associations established by the school of mathematics and statistics radiate to the five major, which are mathematics and applied mathematics, information and computational science, financial mathematics, statistics and applied statistics. The starting point of establishing professional associations is to consolidate students’ professional knowledge and strengthen their practical ability, and provide a better practical development platform for future employment. Its purpose is to combine the professional knowledge that students usually learn with subject contests, skill training, experience exchange, academic discussion, etc. through various activities, so as to apply professional knowledge in happy activities and improve the level of professional skills. There are mainly the following aspects.<sup>[2]</sup>

### **2.2.1 Extend classroom learning and broaden professional knowledge**

Through the platform of professional skills association, students can be exposed to the frontier trends of disciplines, carry out the vertical and horizontal expansion of professional knowledge, feel the integration of multiple disciplines, hold professional academic activities and discussions, deepen the content of classroom learning, broaden the scope of knowledge and deepen the understanding of knowledge.

### **2.2.2 Stimulate interest in learning and promote the construction of study style**

By organizing students to participate in professional activities and professional practice and encouraging students to directly apply what they have learned in class to practice and serve the society, it not only makes up for the lack of strong theoretical and monotonous professional classroom teaching, makes students feel the fun of professional learning, stimulates learning enthusiasm and enhances learning motivation, but also creates a professional cultural atmosphere and promotes the establishment of a good style of study.

### **2.2.3 Provide practice opportunities and exercise professional skills**

Combined with professional characteristics, the school guides students out of the classroom, into the society, participate in professional social practice, cultivate professional skills and improve professional level. For example, students of the skills association regularly go to local communities and cooperative primary and secondary schools for volunteer education. At the same time, they can also learn from in-service primary and secondary school teachers, increase opportunities to contact with the professional environment, and improve their professional level and skills.

### **2.2.4 Shaping subject ability and improving comprehensive quality**

While broadening students’ knowledge, improving professional skills and promoting the construction of study style, the professional skills association is also cultivating students’ sentiment, tapping students’ potential and giving students the opportunity to express themselves and display their talents. Through professional skill training, professional practice and subject contests, students can improve self-care ability, organization and management ability, communication and coordination ability, social activity ability, etc.

## **3. Work results achieved**

### **3.1 Pay attention to training and achieve results of the training of applied talents**

Mathematics pays attention to the cultivation of the spirit of exploration and the pursuit of rationality. With the development of the sequence activities of the mathematical culture festival and the professional skills association, mathematics thinking and cultural literacy have been effectively cultivated, and good results are obtained in subject contests and the construction of study style.

#### **3.1.1 Breakthrough in subject contests**

With the mathematical culture festival as the carrier, the professional skills association as the platform, and under the correct guidance of the college, we vigorously promote the in-depth integration of teaching and scientific research. Through actively exploring the “double training” mechanism, we effectively help the growth of young teachers, stimulate the enthusiasm of teachers, and actively guide mathematics students to actively participate in various subject contests, and achieve excellent results in the contests. In the past three years, students have won 29 national awards and 181 provincial awards. Among them, in 2019, students won one first prize in Guangdong financial modeling competition for the first time. In 2021, students participated in the National College Students’ mathematics competition and entered the finals for the first time, and won one national second prize in the finals. Also, in 2021,

students' works were promoted to the national finals for the first time in the market research and analysis competition, and won one national first prize and two second prizes in the finals. The achievement of the contests also fully reflects the outstanding achievements of young teachers in teaching, scientific research and education.

### **3.1.2 The construction of study style has been improved**

The study style is the comprehensive embodiment of the school's study spirit, attitude and principle. The school of mathematics and statistics fully mobilizes the enthusiasm of teachers and students, and grasps the key to the construction of study style by strengthening students' ideological and political education, strengthening discipline education, cultivating professional learning interest and building a good class style. The school of mathematics and statistics has been rated as the advanced unit of study style construction for two consecutive years, and the success rate of students' postgraduate entrance examination has increased year by year.<sup>[3]</sup>

### **3.2 Pay attention to application and achieve results in innovative training**

The cultivation of applied talents also focuses on cultivating students' innovative spirit, entrepreneurial ability and innovative personalized thinking. The ideological and political education team of universities is the leader of college students. It undertakes the important responsibility of doing a good job of ideological and political education. It is an important force for colleges and universities to adhere to building morality, cultivating people, casting soul and educating people. The school of mathematics and statistics has made great efforts to promote the construction of the ideological and political team as a whole, taking the application of ideological and political topics as the starting point, giving full play to the advantages of teamwork, and the work of the ideological and political team has made innovations and breakthroughs. In the past three years, it has obtained 11 ideological and political research projects and published 12 research papers.

In addition, the school of mathematics and statistics makes full use of the platform of five professional skills associations to effectively cultivate students' innovative consciousness. In the past three years, under the guidance of teachers, students have obtained 34 innovation projects for college students at or above the school level, including 5 at the national level and 11 at the provincial level, and students have published 6 academic papers.

## **4. Conclusion**

In the talent training program, the school should pay attention to strengthening ideological guidance and value orientation. According to the training characteristics of professional talents and the requirements of professional ability and quality, there are clear educational requirements from the professional training objectives, the curriculum setting supporting the training objectives to the achievement of graduation objectives, so as to cultivate socialist builders and successors with all-round development of "morality, intelligence, physique, beauty and labor". The school should also pay attention to the infiltration of mathematical culture in the activities of Mathematical Culture Festival and the cultivation of professional skills in the second classroom of professional associations. Secondary college should resolutely implement the requirements of the school and carry out activities with distinctive characteristics in the activities of professional learning, discipline competition, project application, practical research and social services, so as to promote the all-round development of students and help the cultivation of applied talents.

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