

# Research and Practice of Co-training Mode of Mathematics Normal School—Take the Mathematical Science College of Yibin University as an Example

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**Abstract:** *Actively explore and local basic education cooperation, normal education training practice mode, gradually formed the suitable for students learning and adapt to the needs of local basic education development of several school practice teaching mode, respectively for teachers teacher education teaching part-time mode, school cooperation development curriculum mode, student competition mode, training base depth cooperation mode, field practice mode, student community activities, improve the mathematics normal education teaching skills, enhance employment competitiveness, for the high quality to lay a solid foundation for the employment.*

**Keywords:** Mathematics and applied mathematics major, School-training, Teaching mode.

## 1. The Significance of the Training of Mathematics Normal School

Since the 18th CPC National Congress, the CPC Central Committee with Comrade Xi Jinping at its core has attached great importance to the cause of education and the building of the ranks of teachers. The General Secretary has pointed out that “education is an important plan for the country and the Party”. Education has a fundamental, guiding and overall strategic position. The Modernization of China’s Education 2035 issued by the Central Government defines the strategy of giving priority to education development. To build a modern socialist country, we must first build a strong education country. Education is important, moral education is the fundamental task of education, training teachers is the fundamental. Since 2014, the central committee of the communist party of China, the Ministry of Education have issued the opinions on the implementation of excellent teacher training plan (i. e., excellent teacher training plan 1.0) the measures for the implementation of ordinary universities normal professional certification (provisional) “on the implementation of excellent teacher training plan 2.0” the new era basic education plan and other guidance documents, are clearly put forward normal talent training and basic education services in areas such as cooperation, innovation students education practice mode, strengthen the education practice, improve the quality of training. Most normal colleges and universities are actively focusing on how to strengthen the cooperation with the government, middle school, focus on strengthening the teacher vocational skills training of normal university students, improve the education and teaching practice ability of normal university students [2-6]. But most of the research is focused on from one aspect, such as normal “in type” education practice mode construction and implementation of [4], local undergraduate course colleges and universities “soft ordering” university-enterprise collaborative education path research [5], based on the “integration development” local comprehensive university “new normal” construction to explore [6], etc., but the school cooperation, cooperation depth and breadth is not

enough, give full play to the middle school and education training enterprises in improving students practice teaching quality effect has yet to be explored.

## 2. School Cooperation Mode of Mathematics Normal Major

In order to improve the practical teaching ability of mathematics normal university students, we actively explore the cooperation with local basic education, and carry out the practice mode of co-education of normal university students. After several years of teaching reform, the following school co-training practical teaching modes have been formed.

### 2.1 Teacher Education Teachers Teach Part-time Teaching Mode

Through the mode of “inviting in and going out”, the close cooperation between universities and middle schools is realized, and the education is coordinated, and the complementary advantages of university teachers and frontline teachers are realized. On the one hand, “please come in”, hire excellent front-line middle school teachers and university teachers to integrate the teaching, the same course, such as micro training, professional training, etc., to guide students to participate in teaching competitions. Invite middle school principals and middle school teachers to carry out the principal forum, the style of famous teachers, excellent alumni inspirational sharing meeting, serve as graduation thesis double tutors and other highlight the cultivation of students’ practical ability. On the other hand, “go out”, select excellent teachers to middle school training, train “double teachers and double abilities” teachers; build basic education service team; cooperate with middle school teachers to conduct research and publish teaching and research papers.

### 2.2 School-school Cooperative Development of Curriculum Mode

School cooperative development curriculum is a joint

development curriculum by the school and secondary schools. There are two main ways to develop cooperative courses: the first is to develop practical courses. That is, on the basis of the middle school typical cases and excellent teaching design on the basis of the original curriculum. For example, in the professional practical training courses of mathematics and applied mathematics, the excellent video and excellent teaching design and lecture draft of the cooperative schools are added. The second is to develop courses within the major category. Combined with the needs of middle school mathematics top innovative talents training, within the scope of this professional field content development, such as in the primary algebra, elementary geometry and competition mathematics courses into basic education highlights innovation consciousness, innovative thinking and innovation ability training typical, examination questions in recent years, the university entrance exam, etc.

### 2.3 Student Competition Mode

Relying on the student activities of the college, the teaching ability competition of junior students is held in June every year. First, the competition has professional teachers and teachers from cooperative schools as tutors and judges. In the common tutoring work, cooperative school teachers and professional teachers guide students from different perspectives, expand the vision of normal students, expand the professional awareness of the professional staff of basic education, and make the tutoring and competition work become the platform of school cooperation; second, the competition makes our college understand the employment needs of basic education and the industry development trend in the first time, so as to carry out professional curriculum reform in time to meet the needs of industry development. According to the employment situation, adjust the train of thought of professional training, and carry out the teaching reform according to the employment needs of basic education. At the same time, the competition becomes a platform for teachers to timely understand the current situation of basic education and have close contact with the cooperative schools; third, the winners can directly enter the cooperative schools. This "school-middle school" through train not only solves the employment of students, but also improves the teaching quality of school practice teaching.

### 2.4 Practice Base Deep Cooperation Mode

In order to ensure the students' off-campus practice and training, and make the smooth implementation of school-school cooperation, some schools with long cooperation time, strict management, strong pioneering spirit and active support for "double mentors" for the practice are selected as the school practice and training bases. The implementation of "education internship-education internship-education study-graduation thesis" "double mentor" integration of collaborative training [2]. "Double tutors" put forward clear requirements for the whole process of "before practice-during practice and after practice", establish standardized educational practice norms, strengthen process management and supervision, and ensure the effectiveness of practice teaching. "Double tutor" guides students to carry out educational study and graduation thesis guidance around the problems encountered in educational practice, so as to

cultivate normal university students' practical ability, teaching reflection and teaching ability of research.

### 2.5 In-post Practice Mode

Open up a new way of employment-oriented "internship-employment" integration, before the internship, invite the cooperative schools to hold job fairs, double selection meetings or information meetings in the school, so that students can have a comprehensive understanding of the job setting, job requirements, salary level, later development and other aspects of the cooperative schools. Students choose field practice unit, during the field internship students by cooperative school mentor, college teachers for field practice, counseling, the middle school and college "double mentor" system, on the one hand, cooperative school students as their future teachers to cultivate, arrange backbone teachers as mentors, guide more attentively, more careful, more strict, better results, achieve small and fine avoid general practice large and extensive, on the other hand make the college of students and middle school regulation, can also guarantee the quality of field practice teaching, also can ensure the cooperation school recruitment to satisfactory teachers.

### 2.6 Characteristic Brand Student Activity Mode

In order to improve students' professional quality of normal education, the characteristic brand "Normal Students Carnival" series of student activities. The director of the student Affairs office serves as the person in charge to conduct guidance, docking and activity monitoring to ensure the professionalism and high quality of the activities. On the one hand, "please come in", invite principals and famous teachers of cooperative schools to enter the school, carry out lectures related to the requirements and requirements of basic education positions, give demonstration classes, and serve as judges, etc. On the other hand, "going out", to visit the middle school, voluntary tutoring students, observe the middle school grinding classes and competition classes, participate in teaching and research activities, middle school theme class meetings, summer "three to the countryside" and other forms, to carry out community activities.

## 3. Conclusion

Our school takes the school co-school training mode as the platform, Selected and built a number of high-quality education practice and enterprise practice bases, In the normal university students education practice and professional practice, teacher education teachers part-time teaching and other aspects of the long-term cooperation long-term mechanism, It has built an experimental area for teacher education reform where universities and middle schools to carry out training and pre-service and post-service, Effectively improve the quality of practical teaching, Has cultivated a large number of firm faith, solid foundation, outstanding ability, The "integration of teaching and research" of the outstanding teachers who adapt to and lead the middle school mathematics teaching reform, Improved the influence and competitiveness of mathematics and applied mathematics graduates, Graduates are recognized and praised by employers.

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## Author Profile

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