

## The Investigation and Analysis of Mathematics Education Practice Courses in local Undergraduate Colleges

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**Abstract:** Mathematics Education Practice Courses are important ways which normal students linking theory with practice and get under the tutelage of the actual ability to teach and to improve the overall quality. This paper investigates the present situation of the mathematics education practice courses setting in our university. The results show that some aspects of curriculum setting need to be further revised and improved. Through the analysis of the results of the survey, we pointed out the problems of the current curriculum, and put forward some suggestions for improvement.

**Keywords:** Practice courses; Mathematics education; Investigation and analysis

### INTRODUCTION

After entering twenty-first Century, with the development of science and technology and the coming of the trend of lifelong education, teacher education in China presents the new trend of integration of teacher education and specialization of teachers' profession, and so on. Only through continuous reforms can normal universities and colleges keep sustainable development. Mathematics Education Practice Course is an important way which normal students linking theory with practice and get under the tutelage of the actual ability to teach and to improve the overall quality. The purpose of the practical courses is to train teacher students career awareness, promote normal school students to master the basic skills of the teaching profession, improve their actual ability to engage in education and teaching and research work. In addition, it is also a test of Teachers Colleges educational philosophy, and culture of one of the program, teaching content and methods of teaching standards [1].

Long-term since, the local normal universities paid attention to theories, light practice, theory and practice are in apart, and practice effect was not timely guidance theory. Teachers carefully selected texts, prepare and presented lectures using old fashioned delivery technologies; classrooms were always overcrowded, laboratories were overwhelmed, and education field trips unfold liked invading armies. Students were seen by their teachers as empty vessels to be efficiently filled with scientific knowledge. Students received teacher education module, was still mainly three courses: pedagogy, psychology, teaching methodology of middle school. And the setting of mathematics curriculum between the middle and university class were not linked. In addition, the focus of educational practice curriculum was not outstanding, the form was single, and the practice time was short. Simultaneously, normal education practice couldn't runs through the learning process, made the theory knowledge acquisition not been tested. Some students complained that it was too

little to participate in the actual teaching situation, the lack of effective teaching tact in the teaching practice.

### Investigation and analysis

The research subjects are normal universities expert teachers, middle school mathematics instructors, juniors and seniors in school of mathematics and finance. We interviewed 3 expert teachers and 6 middle school mathematics instructors. We conducted a random survey of 60 students from major in mathematics and applied mathematics, and the actual retrieval questionnaires are 57 pieces, among which 38 are female, and 19 are male.

Through interviews in expert teachers to understand the overall situation of the mathematics normal students practice curriculum and the opening of the case, found in our universities set up the practice of rich course content, broadly include the simulation of classroom teaching, education, trainee, educational

practice, etc. And comparison of two sets of mathematics education practice curriculum plans

formulated in 2012 and 2016, the latter has improved significantly and the class ratio is also increasing.

**Table-1: mathematics education practice courses**

year	Course Title	Academic credit	class hour (week)	semester number
2012	Vocational skills training for teachers	4	72	6
	Mathematics Teaching Theoretic	3	48	5
	Multimedia Courseware Design	3	48	5
	Classroom Observation (一)	1	1 W	2
	Classroom Observation (二)	1	1 W	4
	Classroom Observation (三)	2	2 W	6
	Educational Internship	10	12 W	7
2016	Vocational skills training for teachers(1)	2	16+1W	2
	Vocational skills training for teachers(2)	3	48	6
	Mathematics Teaching Theoretic	4	48+1W	5
	Multimedia Courseware Design	4	32+2W	5
	Classroom Observation (一)	1	1 W	2
	Classroom Observation (二)	1	1 W	4
	Classroom Observation (三)	2	2 W	6
	Educational Internship	10	20 W	7

However, there is no educational study as an independent course, the relative neglect of the train student's education teaching and research capabilities. In interviews with middle school mathematics teachers, we investigated their creation in higher normal colleges and universities mathematics education practice curriculum views, and how to set the curriculum reasonably can make the students adapt to the new work as soon as possible. In the survey, we obtained some conclusions as follows:

- Normal school students master such abilities as teaching design, teaching analysis and language expression, but they are unfamiliar with middle school mathematics textbooks and weak in teaching strategy. It is suggested that middle school teachers should be employed as the instructor of normal students' simulation classroom teaching and training.
- Some middle school teachers pointed out that normal students and young teachers are relatively new in basic education and scientific research. It is suggested that teachers colleges should pay attention to the cultivation of scientific research ability of normal students.
- Some middle school teachers suggest extending educational probation and practice time.

In the investigation of college students, we investigated the mastery of teaching skills of normal students from three dimensions: preparation skills before class, classroom teaching skills, teaching evaluation and reflection skills. Up to 85% of students think that they can skillfully use multimedia technology for teaching activities. Only 35% of students can master

teaching strategy, the other students fail to firmly master teaching strategy. In addition, the survey indicates that 60% of normal university students poorly master teaching evaluation. For those problems, normal universities should enhance students' attention to teaching strategy and teaching evaluation, add teaching strategy and evaluation training content in teaching and strengthen training so as to improve students' practice ability. Some students hope that they can have more lectures and participate in class management in the teaching practice. Some other students suggested that normal universities and training schools to strengthen ties and bring more convenience to them.

**Improvement strategies**

The survey shows that there are still some problems in the teaching of mathematics education practice courses in our university. In order to improve the quality of personnel training, we can make efforts from the following aspects:

**To construct scientific teaching system**

According to social basic education needs and mathematics development, delete some old-fashioned knowledge and unsuitable for development of mathematics subject, rationally distribute the time for theory teaching and practice teaching and optimize course setting.

**Strengthening pre service practice**

Modern educational research tells us that students retain 90% of what they say as they do something[2]. Practice can consolidate students' theoretical knowledge, and help students better utilize knowledge. It is required to attach importance to

teaching practice and offer more practice opportunities and time for normal school students. Through long-time teaching practice, students' teaching ability, expression ability and classroom mastery ability can improve and they can lay a solid foundation for future work [3]. In addition, the teacher should improve students' cognitive level of practice learning belief and they should guide students to develop the function of correct learning belief.

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