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## A commitment to building and implementing an outcome-based practicum for teacher education majors: Experience from China

Compromesos amb construir i implementar el pràcticum basat en resultats per als estudiants principals normals: experiència de la Xina

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### **Abstract**

To comprehensively guarantee and improve the quality of teacher education, China is currently carrying out a teacher education major professional certification program throughout the country. The basic concept of this program includes three aspects: Student-centered focus, Outcome-based Education, and Continuous Quality Improvement. The standards and assessment requirements of the Teacher Education Major Professional Certification attach great importance to the construction and implementation of a practicum for students majoring in teacher education. The core requirements in the Cooperation and Practicum section include: establishment and operation of the threefold collaborative training mechanism; establishment and management of the evaluation of the teaching practice system; and the implementation of the “dual instructor” system in education practice. This mainly involves and examines the five aspects of collaborative education, education base construction, practical teaching, instructor team, and management evaluation. Shanghai Normal University is presented in this paper as a typical example. Many of its teacher education majors have now passed the second level professional certification. We

believe that our professional experience and the example of our practicum for teacher education majors may serve as a reference for other countries in the world.

### **Keywords**

Practicum, teacher education majors, professional certification, teacher education, professional experience, China.

### **Resum**

Per garantir i millorar de manera integral la qualitat de la formació del professorat, la Xina està duent a terme en l'actualitat un programa de certificació professional principal de formació del professorat en tot el país. El concepte bàsic d'aquest programa inclou tres aspectes: l'enfocament centrat en l'estudiant, l'educació basada en els resultats i la millora contínua de la qualitat. Les normes i els requisits d'avaluació de la certificació professional de l'especialitat de formació del professorat concedeixen una gran importància a la construcció i implementació del pràcticum per als estudiants que de l'especialitat de formació del professorat. Els requisits fonamentals en la secció de Cooperació i Pràcticum inclouen: l'establiment i funcionament del triple mecanisme de formació col·laborativa; l'establiment i gestió de l'avaluació del sistema de pràctica docent; i la implementació del sistema "d'instructor dual" en la pràctica educativa. Això implica i examina principalment els cinc aspectes de la formació col·laborativa, la construcció de la base educativa, l'ensenyament pràctic, l'equip d'instructors i l'avaluació de la gestió. La Universitat Normal de Xangai es presenta en aquest article com un exemple típic. Molts dels seus estudiants de Magisteri han superat la certificació professional de segon nivell. Creiem que la nostra experiència professional i l'exemple de les nostres pràctiques per als estudiants de Magisteri poden servir de referència per a altres països del món.

### **Paraules clau**

pràcticum, estudiants importants normals, certificació professional, educació del professorat, experiència professional, Xina.

## **Introduction**

As is known, in our increasingly changing and innovative society, the importance of talent training is becoming constantly more prominent, and more and more attention is being paid to the teaching ability of elementary school teachers. Indeed, all major countries in the world are actively exploring the cultivation of a better quality of teachers of this educational level. As the largest developing country in the world and one of the most important economies, China also attaches great importance to the training of elementary school teachers. In this respect, in recent years junior high school students in some parts of China have performed well in the PISA test, which proves that the junior high school teachers in these areas have excellent teaching ability. The teacher education practicum in China has a solid historical tradition and acts as a driving force for innovation. In the face of the growing demand of the Chinese people for high quality elementary education and high-quality elementary school teachers, China is also actively exploring ways to improve the quality of teacher

education in normal universities or teacher education colleges, and it has gained some valuable professional experience in the construction and implementation of the practicum in teacher education.

### **Context**

Along with the rapid development of Chinese society, China's elementary schoolteacher training quality needs to be adapted to the pace of social transformation. The biggest contradiction in teacher training in China at present is the one between the quality of teacher training and the increasing demand for "good teachers" from the masses (Zhou & He, 2020). Some colleges and universities have similar training programs for teachers and non-teachers, and their training objectives and the characteristics of teacher education in particular are not clear enough (Wang, 2017). To comprehensively guarantee and improve the quality of teacher education and to provide strong support for the cultivation of high-quality teachers, China is now carrying out a teacher education major professional certification program throughout the country. The teacher education major professional certification is an external evaluation carried out by specialized education evaluation and certification bodies on the quality of teachers' professional training according to the certification standards. It aims to prove whether the major can meet the established quality standards of talent training in the current and foreseeable periods. This certification is based on rigorous scientific research and demonstration work. The pilot work on the certification was carried out between December 2014 and December 2016, providing useful experience in improving certification standards and exploring the certification method. In 2016, the Center for Higher Education Teaching Evaluation launched a research project on the teacher education major professional certification and made a comparison between China and other countries to prepare a research report on the quality assurance of domestic and international teacher education. A drafting group composed of experts from provincial administrative education departments, education evaluation institutions and teacher education colleges operated between 2016 and 2017. It held several meetings, lasting more than half a year, extensively soliciting opinions from relevant parties, and repeatedly revising and improving the program, after which it finally implemented the teacher education major professional certification (Ministry of Education of PRC, 2017a).

The three levels of monitoring and certification are interconnected and promoted step by step, covering secondary education, primary education, and preschool education. The teacher education major professional certification specialty promotes the connotation construction of the teacher education specialty and continuously enhances the ability level of its basic education service (Ministry of Education of PRC, 2017b). Based on the current situation and characteristics of China's teacher education, the teacher education major professional certification has made many innovations in the concept, system, standards, and methods of certification, contributing Chinese solutions and Chinese wisdom to the reform and development of teacher education worldwide (Liu & Lu, 2019).

The teacher education major professional certification in China is a kind of external evaluation carried out by specialized education evaluation and professional

certification institutions according to the professional certification standards for the quality of teacher education professionals, aiming to prove whether the specialty can meet the established quality standards of teacher cultivation in the current and foreseeable period (Wang, 2019). The teacher education major professional certification focuses on the ability training of teacher education students, reforms the training system and mechanism, establishes the output-based continuous improvement quality guarantee mechanism and quality culture, and constantly improves the quality of teacher education (Liu, 2019).

The basic concept of the teacher education major professional certification is put forward by combining the development needs of teacher education in China and the concept of international mainstream professional certification. It mainly includes the following three aspects (Ministry of Education of PRC, 2017b):

#### *Student-centered focus*

This focus emphasizes the transformation from the traditional model centered on “teaching” to the new model centered on “learning”, which requires that the students follow the growth and development standards of teacher education students, as well as the allocation of educational resources and the arrangement of teaching activities centered on the learning effect and personality development of teacher education students.

#### *Outcome-based education*

This aspect emphasizes the overall development of teacher education students based on social needs and people, focusing on the development results of these students and on what they have learned and what they can do after graduation. It also reversely designs the curriculum system and teaching aspects, sets teachers and resource conditions, and evaluates the quality of training of teacher education students.

#### *Continuous quality improvement*

This aspect focuses on the students’ core ability quality demands (graduates), on the all-round talent cultivation activity of teachers, and on the overall tracking and evaluation process, using the result to improve personnel training work, to form a closed-loop evaluation-feedback-improvement circuit, to continuously improve the quality of the security mechanism and the pursuit of culture of quality excellence, and to promote the quality of teacher cultivation.

### **Professional experience**

It is known that the practicum is where the competencies of the degree are applied and developed in a more complete and complex manner. In the case of China’s teacher education major professional certification, the first level index “Cooperation and practice” pays close attention to the construction and implementation of the practicum for the students majoring in teacher education. “Cooperation and practice” focuses on three aspects: firstly, the establishment and operation of the threefold collaborative training mechanism; secondly, the establishment and management evaluation of the teaching practice system; and thirdly, the implementation of the “dual instructor” system in education practice. Likewise, it includes five secondary

indexes, namely: collaborative education, base construction, practical teaching, instructor team, and management evaluation (Ministry of Education of PRC, 2017b).

#### *Collaborative education*

This evaluation index requires that teacher education majors should establish a stable cooperation relationship with the government and elementary education schools, centering on teacher education objectives and curriculum implementation requirements, by signing cooperation agreements with local administrative education departments and elementary schools to implement specific measures of collaborative education, with standardized agreements and normalized organizational implementation measures. In accordance with the requirements of the pre-service and post-service integration of teacher education, a cooperative community of teacher education, training, research, and service integration has been formed.

#### *Education base construction*

This evaluation index requires close cooperation between teacher education majors and elementary schools to establish stable education practice bases which can provide an appropriate education practice environment and practice guidance while meeting the education practice needs of teacher education majors. There should be no less than one education practice base for every 20 interns to help teacher education students to get empirical guidance and demonstrations by example from excellent in-service teachers.

#### *Practical teaching*

This evaluation index requires that teacher education majors should have a complete practical teaching system, including education probation, education practice and education study, covering teachers' moral experience, teaching practice, class management practice, teaching and research practice, etc., all of which organically connects with other educational aspects. The accumulative time of education practice is not less than one semester. Education practice is organized in a centralized manner to ensure the class hours of teacher education university students during their internship.

#### *Instructor team*

This evaluation index requires that teacher education majors should implement the "dual instructor" system in which college teachers and excellent in-service elementary school teachers provide joint guidance in the education practicum. The team must have systems and measures for selecting, training, evaluating and supporting teachers in the practicum. The number of "dual instructors" should be sufficient and relatively stable, with clear responsibilities and effective performance of duties. Generally, no less than one college instructor shall be provided for every two practice bases, and no less than one college instructor shall be provided for every four interns. The college instructor, middle school instructor and internship group shall sign a three-way agreement with clear responsibilities and rights. The teacher education majors will have adopted the ways of resident guidance, itinerant guidance and distance guidance through thematic research, collaborative teaching and research, regular training and other aspects to constantly improve the professional level of the "dual instructor" team and its practical guidance ability. The college should regularly evaluate the

effective performance of the “dual instructor” and dynamically adjust its team members according to the assessment results.

#### *Management evaluation*

This evaluation index requires that colleges and majors should establish the relevant system of education practice management and quality control. The education practice management should be standardized and orderly, and the quality control of the main aspects of education practice should be effective. The education practice evaluation and improvement system should be carefully formulated and strictly implemented, continuously optimizing the education practice method and continuously improving its effect. The assessment standards for the education practice of the teacher education majors are specific and clear, thus allowing them to prove the students’ achievement of their teachers’ moral experience, teaching practice, class management practice, and practical teaching and research ability. Practice teaching tasks should reflect the practice goal, with the majors passing the respective standard target requirements.

#### **Typical case**

Shanghai Normal University (SHNU) is one of the key academic institutions in Shanghai and a comprehensive teacher education university. It continues to innovate in teacher education, with a commitment to training outstanding teachers. It attaches great importance to the practicum of undergraduate students majoring in teacher education. Several teacher education majors of the university have now successfully passed the second level teacher education major professional certification, and some teacher education majors are applying or preparing to apply for the second level professional certification.

To implement the educational objectives of teacher education undergraduates and the reform of the practicum, Shanghai Normal University has adopted the following measures:

#### *Threefold collaborative training mechanism*

The university has established a threefold collaborative training mechanism with the administrative education departments and middle schools in Shanghai, providing clear rights and responsibilities, stable coordination and win-win cooperation. It basically forms a cooperative community integrating teacher education, training, research, and service.

The university established the Shanghai Teacher Education Innovation and Development Center to pool and radiate high-quality elementary education resources, to strengthen the formation of specialized education teachers, to promote the implementation of an outstanding teacher education plan, and to form a shared, interactive, and multi-win platform of cooperation on elementary education between universities, governments and elementary schools.

The university cooperates on the development of the education practicum with the Shanghai Municipal Education Commission, the education college of each administrative region, and elementary schools. It has selected many high-quality elementary schools as education practice bases and built a collaborative education platform. Taking the Mathematics and Applied Mathematics Major (Teacher

Education) as an example, 66 basic education schools at all levels in Shanghai have signed up as practice bases, and nearly half of them are model schools. Among the 66 internship bases, more than 40 have established mature cooperative relations and receive the teacher education students of the university for education practice on a stable basis. At present, there are about 120 teacher education majors taking part in internships every year, with one practice base for every three students on average.

The elementary education schools as education practice bases are distributed in all districts of Shanghai in a reasonable and balanced manner. The practice base not only provides complete office facilities and teaching equipment for teacher education major interns, but also selects backbone teachers with noble ethics, high teaching level and enthusiastic guidance for teacher education majors, allowing them to practice with discipline and head teacher guidance.

The Mathematics and Physics School of Shanghai Normal University set up the Mathematics Teacher Collaborative Training Center in 2020. This institution is committed to building an important base for the integrated training of pre-service and post-service teachers, having already established more than 10 mathematics teacher collaborative training bases. It has hired many senior middle school mathematics teachers as adjunct professors, organized teaching and research activities, and guided teacher education students' training, practice and study.

#### *Comprehensive education practicum system*

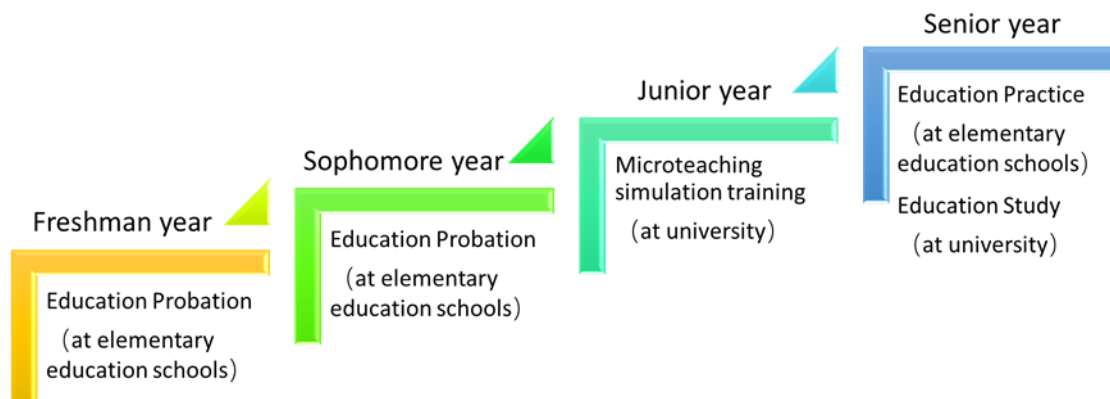
Around the education practicum, the university has established a comprehensive education practice system, which comprises education probation, education practice and education study, including teacher ethics experience, teaching practice, class management practice and teaching and research practice.

For the undergraduate students majoring in teacher education at Shanghai Normal University, the education practicum is one of the key compulsory subjects, an important part of the teacher education curriculum and a necessary aspect of teacher education generally. It promotes students' further education and professional teaching experience while gradually forming good teacher ethics and professional identity and granting a better understanding of professional knowledge to master the necessary education teaching design and implementation, class management and guidance of students' ability to work in primary and secondary school teaching, as well as laying a solid foundation for continuous professional development.

Shanghai Normal University implements three stages of education practicum: education probation, education practice (including microteaching together with simulation training inside the university and practical training outside the university), and education study. The relevant progression flow chart is shown as below:

FIGURE 1

*The education practicum progression flow for teacher education majors at SHNU*



Education probation is the transition link for teacher education majors between learning educational theory and education practice. It provides teacher education students with the opportunity to visit and observe education in the designated probation school, to strengthen their understanding of the current situation of basic education, to understand the general rules of basic education teaching, to deepen their understanding of the theoretical study of education, and to lay a good foundation for education practice. Educational probation is carried out at the base school in Shanghai with the assistance of part-time instructors from outside the university.

The course objectives of education probation include: the understanding of the norms of teacher ethics, the understanding of the basic work of middle school teachers, and the cultivation of emotion and attitude towards the teaching career in the probation process. Students participate in teaching activities such as lectures, after-class tutoring, teaching and research, and they experience teaching design and evaluation, observing the teaching process, participating in correcting homework and in after-class tutoring, and analyzing what they see on the premise that they have learned to combine theoretical knowledge with practical knowledge. They also experience educational management activities, assist head teacher work, develop their team spirit and good interpersonal communication skills, and design theme education and club activities.

The specific content of education probation mainly comprises listening to a series of lectures delivered by excellent teachers of the probation school (which deal with classroom teaching, head teacher work, teaching reform dynamics and other front-line practical knowledge of teaching); watching live teaching videos of excellent primary and secondary school teachers and interns; understanding and becoming familiar with the curriculum standards and textbooks of secondary and primary school and kindergarten; going to middle schools, primary schools and kindergartens to learn about teaching activities in and out of class; understanding the daily work and general working methods of the head teacher in primary and middle school and kindergarten; and observing middle school, primary school and kindergarten excellent teaching demonstration classes.

Education probation is set in year one, year two and year three, with four semesters in total. In each semester, teacher education majors are required to go to elementary education schools 2 or 3 times for a total of 2-3 half-days.



At the end of education probation, students are required to complete a probation perception and probation manual. The evaluation of education probation is mainly based on the evaluation standard of education probation content stipulated in the “education probation curriculum outline” formulated by each college, which is comprehensively given by the guidance teacher of the probation base and the education probation course teacher at the university.

Around education practice, the university has established and improved the file bag system for teacher education university students, the main contents of which include the practice plan, practice teaching plan, lecture evaluation record, practice summary and assessment, etc. Once the new education practice handbook of the Shanghai Normal University has been revised and adjusted, the full implementation of the teaching practice, the teacher in practice, the research practice with its detailed requirements, the cultivation of students’ independent thinking and critical thinking ability, creative problem solving, and communication and team cooperation ability, together with normal education practice file cover, demand that students carry out self-examination and self-management, which colleges and schools are urged to check.

Education practice at elementary schools is arranged in the first semester of the senior year, and it is divided into two stages: the first stage is concentrated practice, which covers the first 12 weeks of the first semester of the senior year, while the second stage involves dispersed practice, covering the last 6 weeks of the first semester of the senior year.

The organization method of education practice is as follows: the first stage of education practice is the centralized internship (the first 12 weeks), which should in principle be arranged in the education practice base of Shanghai Normal University. The second stage of education practice, namely decentralized practice (the last 6 weeks), is a combination of various types of practice. The organization of education practice considers students’ employment intentions. The specific measures are as follows: provision of opportunities for middle school, primary school and kindergarten to understand, investigate and retain interns, and to provide opportunities for teacher education university students to practice and to choose a career. Non-urban Shanghai students can contact their former high school, junior high school, primary school, or kindergarten for internship. After the internship agreement is established, the internship school shall manage and teach the interns according to the requirements of the internship program at Shanghai Normal University. Students of non-teacher education majors can also participate in the practice of teacher education majors. The premise is to complete the non-teacher education professional internship tasks in the curriculum plan, and it must be submitted with the student’s written application, together with the signature of the student’s parents and the seal of the school of university.

The main content of education practice includes teaching practice (multi-type classroom teaching and extracurricular activities, etc.); head teacher work practice (head teacher daily work, theme class meeting, home visit, etc.); and teaching and research work practice (educational investigation, writing educational research papers).

The requirements of the university for students taking education practice are that the practical teaching time of teacher education students themselves should not last less than 18 hours; that each teacher education student should attend at least one teaching report class; and that students should write Education practice reports or conduct some micro-project research.

The education study is arranged in the second half of the senior year and lasts for two weeks. The main content of the education study includes thematic discussion; classroom teaching experience exchange; comments on excellent teaching videos of students of the same year; teaching research and discussion; and a series of reports by education experts. The requirements of the university for students taking education study are to comment on the videos of education practice classes; to select typical teaching cases for special discussion; and to write study reports.

The university has also engaged many elementary education school principals, teaching and research staff from elementary education guidance and research institutions, and excellent regular or irregular senior elementary education teachers to give lectures or practical instruction for teacher education students, and to focus on elementary teaching professional experience, elementary education management, elementary teachers' professional development, elementary education reform's implementation, and enhanced ethics construction, all of it aimed at enriching and promoting the professional quality and ability of teacher education students.

It is worth mentioning that, in addition to the internship in Shanghai or other cities on the Chinese mainland, the school also actively promotes the establishment of overseas internship and education practice bases for teacher education majors, carrying out short-term overseas internship and training activities. The number of overseas interns continues to increase every year. The university adopts a variety of modes, such as government-sponsored internship abroad, student exchange, and co-training with well-known foreign educational institutions to develop teacher education practice courses and to enhance the level of international exchange and learning while improving students' international literacy. By 2020, the number of foreign exchange and cooperation projects had reached 310.

#### *Strict instructor selection for the education practicum*

The university puts forward clear requirements on the work duties and assessment management of teachers serving as instructors of the education practicum, which are established by a teacher education team construction and management office. This office is responsible for the building, planning, organization, coordination, examination, verification, supervision and assessment of the school's teacher education team. Working groups are set up in each school to take charge of the building, planning, organization, implementation, supervision, and management of the teacher education faculty.

The university adopts an instruction pattern called the "dual instructor" system, under which both the instructors of the university and the instructors from the elementary education practice base schools teach jointly in the education practicum. There are relatively comprehensive mechanisms and measures for selecting, evaluating, training, and supporting instructors in the education practicum.

The dean of each university school and the education practicum director are responsible for the inspection of the university's education practicum instructors' job performance. The supervision office of the practice base schools is responsible for inspecting their own education practicum instructors' job performance. University schools dynamically adjust the selection and engagement of the education practicum instructors according to their job performance evaluation in the last round of education practicum instruction.

The practicum instructors from the university who are selected by each university school must have good ideological and political literacy, professional ethics literacy, scientific and cultural literacy, solid professional knowledge and accomplishment, good educational theory literacy, solid skills in education and teaching, rich experience in education and teaching, and strong education research ability. The practicum instructors from practice base schools who are selected and engaged must have been teaching for more than five years or be of senior category. Each teacher education student shall be assigned 1-2 practice base school instructors, one of whom is responsible for discipline instruction while the other is responsible for head teacher's practice instruction.

In order to train the instructors and to continuously enhance their quality and ability of instruction, the university regularly invites elementary education experts of national or international prestige. Shanghai's excellent elementary school principals or teachers come to the university to conduct exchange and training activities. These activities mainly include lectures, counseling, and cooperation on the education practice instruction. Additionally, each practice base school provides professional guidance and training to the practicum instructors.

#### *Effective quality control and evaluation of the education practicum*

The management of the education practicum in this university is of relatively standard character, and it involves carrying out the quality control of key aspects and implementing the education practicum evaluation. According to the results of China's second level teacher education major professional certification, the performance of the education practicum at our university is highly effective.

Each university school was instructed to formulate several management systems and measures, requiring instructors to inspect the practice base schools for which they are responsible, to be attentive to the teacher education students' thoughts, life, and performance in the education practice activities, and to troubleshoot any problems in a timely way, ensuring that the education practicum progresses smoothly.

The assessment and evaluation methods of the education practicum are as follows:

##### *a) Process evaluation*

The process evaluation mainly includes verification of attendance and of education practice performance in the education practicum, which are scored jointly by the instructors of the university and of the practice base schools.

##### *b) Requirements for the final assessment*

To successfully pass the final assessment, teacher education students need to complete three tasks: teaching skills practice (practice manual writing situation,

teaching plan writing, public class teaching); head teacher work practice (class management, theme class meeting organization); and the writing of the education investigation report or research report. The final assessment is scored jointly by the instructors of the university and of the practice base schools.

#### c) Structure of the final assessment

The students' final education practicum score is calculated on a 100-point system, which is composed of attendance score, process evaluation score and final assessment score. The score structure is: 20% attendance, 20% process evaluation, and 60% final exam.

According to the students' performance in the education probation, education practice and education study, for the implementation of individualized education and guidance the school arranges full-time teachers and university teachers with education practice when possible, to enhance the education of students in school practice according to the education practice base and the status of the different students, with one-on-one instruction, including listening to lectures, guiding students to design the classroom observation scale, and applying science to strengthen teaching reflection, etc., providing the necessary comprehensive assistance in this way.

### **Discussion**

As an important part of China's higher education quality assurance system, the national teacher education major professional certification is an essential measure to deepen the education practicum reform, to comprehensively guarantee and improve the quality of teacher education, and to promote the connotative development of teacher education.

In China, almost all colleges and universities and secondary vocational colleges offering teacher education are actively carrying out its reform in accordance with the requirements of the teacher education major professional certification standards, and actively applying for this certification. All this plays an outstanding role in promoting the construction and development of the education practicum, which is of great benefit to teacher education majors and their development, and even to the building of the whole country's elementary school teacher team.

At the same time, China's teacher education major professional certification standards and its implementation and reform measures in relation to the education practicum could provide valuable experience for other countries worldwide.

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