

# A Research for the Gifted Education in China<sup>1</sup>

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Gifted education has been becoming a focus of every field in Chinese society as a special educational mode, since Special Class for the Gifted Youth in the University of Science and Technology of China began to enroll students. In this paper we first introduce the developing procedure of the gifted education in China, and then recommend and analyze the characteristics of a successful gifted educational base in China. At length, we probe into the problems that exist in process of carrying on the gifted education in China for reference.

*Key words:* gifted education in China, principle of gifted education, educational mode

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## I. THE BACKGROUND OF THE DEVELOPMENT OF GIFTED EDUCATION IN CHINA

China has been carrying on open reform after civilization revolution for ten years, newborns and talents who are badly needed in the society mushrooming, under which social condition the educators set up Special Class for the Gifted Youth in the University of Science and Technology of China (USTC, 中国科技大学). And in the year of 1985, a kind of zero to zero class came into being. From then on, it stepped on the stage of the history of Chinese gifted education, mainly including two kinds of gifted educational modes consequently. Subsequently, some other universities and high schools also open similar experimental classes spontaneously, such as the educational reform experimental class, the foundation-intensified class, the experimental class for the youth, some single-subject educational experimental classes in physical education, art, music, science and so

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forth. These sorts of educational classes make the development of gifted education overall. Currently, we can conclude that this kind of gifted education is feasible from experiment of this education for 20 years, especially in the high rate of cultivating talents<sup>2</sup>.

Since it came into existence first in USTC, a great many main universities have emulated this educational mode and set up this kind of classes for the youth. However, quite a few schools set this mode aside in succession, when our educators found that the overall level of the young undergraduates' development was not ideal enough. Some gifted-educational investigators analyzed the lesson of this failure, from which they concluded this situation ascribed to those young talents lack of systematic school education, and this lead to their weak learning basis, and even made them feel labored. In order to help those lay solid foundations for their further knowledge, educators built up some gifted classes for middle school students. Soon, a group of gifted classes for pupils appeared to assist them accept middle school education relaxed. Following this speed of educational development, our country's gifted education is being more and more systematically.<sup>3</sup>

Gifted education, as a special educational form, has become a hot topic among Chinese parents in the hope of their children's success. And at the same time, it has been accepted as an educational pattern, a social focus, and even a regardful civilized phenomenon because of the care of parents, the embroidery of media, the consensus of society and the consideration of specialists. At present, as people's competition for survival becoming more and more intensive, and their economical living conditions more and more well-off, parents pay attention to the gifted education more largely, which results in the phenomenon that a great number of parents taking their children are swarming into the gifted educational experimental classes, especially in several well-developed cities, like Beijing and Shanghai. This phenomenon brings up many questions

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<sup>2</sup> This class has fostered groups of excellent scholars, such as Zhang Yaqin, dean of Asian Academy of Microsoft; Lu Zhengfu, the achiever of President Award for Young Scientist; Qin Luc hang, called the *doctor of nano* and many other elite.

<sup>3</sup> For example, since 1985, as the first gifted education experimental class was started in No. 8 Middle School in Beijing, our country has got more than 70 elementary schools and middle schools with this sort of educational experimental classes. Among them there are some more famous schools, such as the Auxiliary Middle School of Renmin University of China (中国人民大学) in Beijing, Yun Hua Middle School in Tianjin, Tian Yi Middle School in Jiangsu, Suzhou Middle School, and Northeast Yucai School andso on. The leaders of above schools have realized the criticality of the gifted education. After Chinese gifted education has received certain development, in support of Talent Academy of China, Professional Committee in Advanced Talents of Talent Academy of China is ratified in April 4, 1994, which can be called a milestone on the forward road of developing, and indicates Chinese gifted education has stepped into a more profound and brand-new phase.

for us to be pondered over.

Tan Songhua, Standing Vice-President of Chinese Educational Academy, at 12th conference of national middle school gifted educational cooperative team, suggested “the educators must ascertain the system and status of present gifted education, and realize its pressure. Chinese education is not only facing the popularization, but also facing the challenges of the new century and new technologies, therefore we are eager to possess a number of internationally competitive superior talents standing for our country, and it is just our ultimate target, however, why is not there a Nobel Prize winner from our nation? On earth, what hinders us from educating the first-class talent? The education of special talents should be set on an important position in the face of the problem of receiving challenges.” What this president said means that Chinese gifted education idea is not solely cultivating the quality of the young undergraduates or the young graduate students, but the elite who are provided with the abilities of adapting to the more and more drastic international competition.

## II . NORTHEAST YUCAI SCHOOL

Upon the gifted education idea, we introduce the famous experimental base (Northeast Yucai School) of the gifted education in China and explore its characteristics using for reference.

Northeast Yucai School is a gloriously revolutionary traditional school which was established by several elder proletarian revolutionists such as Zhang Wentian and Xu Teli, which is a provincial key middle school directly attached to the Educational Department of Shenyang (Liaoning Province), and belongs to the first group of demonstrational middle schools. In 1993, it was identified as the experimental school of gifted education. Yucai School consistently adheres to the strategic and educational idea of Deng Xiaoping: “Education must be faced to the modernization, the world and the future”; “...must break down the routines to discover, select and foster leaders”; “Talents should be fostered intently.” And Yucai adhere to the scientific developmental perspective-humanism, maintains its aims of setting up a world famous school, and at the same time it endeavors to found Yucai’s gifted education, international education, group operative brand, and the schooling achievement is outstanding.

Northeast Yucai School System includes: a junior middle school, a gifted educational experimental class; an elementary school, a senior high school, an international department, and a science department of senior high school; a foreign language school; acooperative kindergartens with other corporations; Dongguan Model Elementary School

Yucai adheres to the principle of cultivating the students’ moral characters foremost as

systematical project in order to teach the students how to live and how to study through their independent experience, becoming the elite with excellent characters, such as magnificent personalities, responsibilities, broad horizons and so on.

Yucai holds to the idea of comprehensive qualitative education<sup>4</sup>, and stresses the special and all-sided development, and constructs on top advanced scientific labs. They make the students set up profound ideas in their childhood, and cultivate their qualities in science. In addition, the students care for the world development via international communication and cooperation. Increasing comprehensive qualities, students behave quite well in each field. such as some students got full marks in TOEFL, some discovered the general butterfly theorem, two scientific articles were given out on national first-class publications, and some students' designs attained patents. And Yucai's performance in the entrance examination stands on top in the whole Liaoning Province<sup>5</sup>.

### III. THE CHARACTERISTICS OF NORTHEAST YUCAI SCHOOL

#### 1. Adhere to the idea of the gifted education

The target of running Yucai School is to face the 21th century international, informational, and high technological social, and to establish a kind of educational mode combined Chinese and Western educational advantages, which is modern, high-efficacious, and a foundation for educating leadership talents, and to build a school with Chinese characteristic example, experiment, internationalism, and worldwide first class. Under this, the educational target is to learn how to care, how to create, how to develop thoroughly and how to exhibit one is talent. Thereof, Yucai's educational idea is the

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<sup>4</sup> They have gained a succession of wonderful achievements in the International Olympiad (8 gold medals, 2 silver medals, and 1 bronze medal). Especially in the International Mathematical Olympiad, Wang Lie won a silver medal (1996 IMO), Liu Ruochuan won a golden medal (1999 IMO), Qu Feng won a golden medal (2001 IMO), and Wang Botong won a golden medal with full mark (2002 IMO). And in the single discipline contest, they acquired 125 medals including 32 golden medals. Owing to prominent performance in the mathematical contest, the school was identified the *base of Mathematical Olympiad training* in the year of 2000.

<sup>5</sup> 37 students were admitted into Tsinghua University, Beijing University, Zhejiang University and so on without taking part in the entrance examination in 2005. Amid others, there were 21 students admitted into Tsinghua University, Beijing University. 4 students were accepted by University of Science and Technology of Hong Kong in Liaoning Province, offered ¥90,000 every year as scholarship, and among them 3 students were from Yucai. During the oversea examination, 10 students entered Tokyo University, 9 students entered Kyoto University, 1 student entered Stanford University, and some others entered Nagoya University of Japan, Middlebury University of America, London Political and Economical Academy and some other famous foreign universities.

gifted education, and this kind of teaching mode is able to set a solid foundation for fostering the high-qualified creative talents. And the gifted education has already become the competitive main feature of Northeast Yucai School.

To achieve the idea, Yucai carries out incessant innovation on the pedagogical systems and teaching methods, such as elastic educational system, multi-course, diversified teaching methods, optimal teaching methods, scientific learning methods, and advanced technology.

## **2. The manifold innovative modes on the gifted education**

Under the guidance of the gifted educational idea, Yucai has put the educational targets into practice, and created three kinds of innovative gifted educational modes: Gifted Student Speed Study (超常学生高速学习), Single Subject Reinforcement Competence Transfer (单科强化能力迁移), and Development potentiality Transcendence Normal (开发潜能超越常态). The modes have formed a complete theoretical system and successful practical patterns. Next, let us instance the junior middle school.

The school has 16 teaching classes in every grade with 2300 students. Every grade has three kinds of classes, that is, four Special Classes (SC, 特长班), six Three Years of Schooling Normal-Gifted Experimental Classes (TYSNGEC, 三年制常态超常实验班), and six Year Consistent of Schooling Experimental Classes (SYCSEC, 六年一贯制初高中连续实验班). SC, which includes 2 mathematics, 1 English and 1 Japanese ones, makes use of the competence transfer theorem. During the junior middle school periods, the students in mathematics special class are able to complete 5 academic year mathematics courses, and they are offered comprehensive mathematics lessons to further and broaden their mathematical knowledge. SYCSEC make the course plan more reasonable and scientific, and it save some preparing time for the entrance examination entering the senior high school, which can be taken advantage of to cultivate the students' abilities, to develop intelligence, and to improve comprehensive qualities.

Overall, there exists discrepancy between one person and another, so the gifted education does not only offers more opportunities to the gifted students who are especially interested in some subject and who possess peculiar gifts with further developing space, but also to the children who are exceedingly creative and own preeminent intelligence to make them obtain more appropriate education. Through implementing above educational mode like Yucai, different types of students acquire the more developing opportunities which are fit for them.

## **3. The perfect educational system**

The school has formed a consecutive net system from the education (elementary

school, junior middle school, senior middle school), and a selective mechanism that most of the students enter the senior middle school affiliated to Northeast Yucai School straight, such as, the students from SC and SYCSEC hold an examination at the end of spring term of 3 Grade in junior middle school, some of them(about 70-80%) enter the department of senior high school belonging to Yucai, and others take part in the unified province examination the same as the students from other junior middle schools. These can ensure that the talents attain a kind of successive and rational education, still save time from the entrance examination to grasp much more knowledge in the fields they are interested in, and offer them enough space to think and create.

#### **4. The faculty with outstanding qualities**

The key point of putting gifted education into effect rests with a group of the faculty with outstanding qualities.

To accelerate the faculty development and supply the students with the best education, Yucai has begun to refine the faculty actively: endeavor that every teacher owns the opportunity of join the international teaching communication and international academic seminar; organize the teachers in various fields to go abroad, such as England, Japan, America, Singapore and so on, for short-termed training more than one month; work together with East China Normal University and Beijing Normal University to set up some degree courses; encourage young teachers to attain master degree and bi-bachelor degree.

And, to make sure the all-round development of teaching activities harmonious and stable, the school has built up a consulting committee formed by experts in educational management or subject teaching, and delegates in related aspect. The speedy and sound growth of young teachers guarantees high qualities of the faculty group.

Although the above characteristics are not all about Yucai, the gifted education can draw on the experience of it.

## **IV. THE PROBLEMS AND THE REFORM ON THE GIFTED EDUCATION IN CHINA**

Although the gifted education in china, like Yucai School, has made gratifying achievements, we still have some problems to reform. Some scholars have noticed the problems, such as the definition about the gifted student, selecting standard and so on. Next, we give a few other problems that we must pay attention to.

### **1. The gifted education is not equal to contest education**

Referring to the results of the gifted education, most of the people will think about some number of the students who won medals in the International Olympiad, the rate of entrance of a higher school and so on. And, some curricula and coursework for gifted students are designed with the Olympiad contents. But we know the gifted education do not equal to contest education.

The aim of the gifted education is to foster sophisticated and high-positioned leaders.

Although the gifted education has also cultivated many talents who have obtained medals in contests, and supplied universities with high-qualified gifted juveniles, evaluating whether the gifted education system success or not should not depends on the achievements of the contests, but the number of leader in every field that this educational mode can supply the society with. Although there is no “best” gifted education program, each must be designed to meet the needs of particular gifted students.

And the gifted education must offer a program of high-level course, a curriculum with breadth and depth.

## **2. The reform on the pedagogical system of the gifted education**

People call teachers “gardeners” generally, so the school is just as a park full of all kinds of flowers, in which the students are the roses, and the functions of the teachers are fertilization, watering, pruning to make sure the flowers can bloom freely and nationally. There gardeners should not destroy all the other kinds of flower and only cultivate roses, only because they are good-looking.

According to Gardner’s Multiple Intelligence, each student must have a most outstanding intelligence among his seven kinds of intelligence. If the gifted education sought the above stupid thing, we would also lose the real value and the meaning of education. What the gifted education seeks is a park filled with hundreds of sorts of flowers. But present pedagogical system divides student different classes, and in each class the students get the same content. This class pattern will not be changed forever. Clearly, this inflexible pedagogical system can not fit the idea of the gifted education. The students lose the full space to develop themselves.

So we provide the students with flexible and appropriate class level which is divided by the student’s ability, interest and subject. This teaching mode just goes along with the idea of the gifted education and offers suitable teaching methods to different students.

## **3. The gifted education needs the faculty group with high qualities**

We once heard an lesson about profit and loss problems: a kindergarten teacher wanted to hand out candies to the children, if everyone get 5, 12 would be left; if everyone get 7, two children would not acquire their candies. Now, let us think about

how many candies the teacher had, and how many children? Many teachers answered that leaving 12 means profit (盈), two children means loss  $2 \times 7 = 14$  (亏), so the problem is profit and loss problems, and telling students use the formula “ $(12 \text{ (profit)} + 14 \text{ (loss)}) \div (7 - 5) = 13$ ” to get the number of children. And then through  $13 \times 5 + 12 = 77$ , they could get the number of the candies. The teacher stressed that this formula could be used to solve this kind of profit and loss problem. Then, she gave some interrelated exercises. But we know that this problem should be settled through the two identical quantities - children and candies.

Whether the gifted education success or not is entirely effected by the teacher's qualities. The gifted education aims to import methods (渔) to the students, and at the same time, the teachers working at the gifted education pay more attention to the essence and theorem of the subject thinking methods.

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