

Curricula of Experimental Special Education for Gifted Children of Age 10-14

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Special education program for gifted children was launched in No 8 Middle School in 1985. By now five classes enrolling a total of 180 pupils have concluded or are under-going the four-year training program. My report concerns the curriculum of the programs, that is, what subjects the children worked on, why these subjects were offered, how they were taught, and what the results have been.

The class enrolls especially talented ten-year olds with academic ability equaling or above 4th -Graders of primary school. The special education program helps them complete the studies of subjects normally covered by Senior Grades I and II of primary school and all six years of junior and senior middle school, or academic work that takes normal children 8 years to complete. Graduates of this class are expected to be youths with excellent health, upright moral character, and academic attainments superior to average middle school leavers just finishing Senior Grade III.

Of primary importance is the problem

of what subjects they ought to be taught and how to teach them.

We must be fully aware, above all, that the talented children who passed the selective screening test, surpassed their agemates just in certain aspects of IQ, while remaining quite ordinary otherwise, e.g. in regard to physical or non-intelligence factors. In some were even found conspicuous defects. This made it necessary for the planners to make the curricula and academic arrangements quite distinct from what is provided for ordinary school children. Only then could we accommodate to the children's characteristics and make the program a success.

The curricula differ from those for normal children in three respects.

1. Full curricula but reduced work hours. All subjects of study for middle schoolers are offered in the special education program because the latter's purpose, after all, is to administer complete middle-school education. In the meantime, considerable education is made on the number of work-hours needed to accomplish them, which has

been made possible by the unique advantage of the trainees' superior IQ. (see Tables 1-2).

According to stipulations by Beijing educational authorities, the number of class hours for the eight years from 5th and 6th years in primary school through six years in middle school total 5968 periods (not including PE, handicraft, selectives, music, fine arts, history and geography), each period lasting 45 minutes. For the experimental class this brings down the total classwork hours to 56.81% of the officially set figure by a reduction of 43.91%.

2. Greater emphasis on physical education. The young trainees in the special education class show apparent disequilibrium between their intelligence and physical development. This makes physical education for gifted children an especially formidable task to forestall the potential danger of physical problems likely to result from the experiment. So the children are given 5 periods of PE classes each week, totaling 690 in a mere four years, compared to 384 in eight years of normal schooling.

3. Priority on science subjects. While guaranteeing normal progress of liberal arts lessons, we managed to provide the children with what was needed to enable

them outstrip normal middle schoolers in natural science.

Results:

1. The education was completed as planned. Academic success was testified by entrance exams to college upon their graduation, in which the scores for all the trainees surpassed admission standards to key universities+ (see Table 3). Except the single subject of Political Science, they surpassed simultaneous graduates from Senior III of No. 8 Middle School in six other subjects of study, the general average score exceeding the latter by 35.89 points. Six subjects were passed by all students of the class except only physics.

+ Key Schools or Key Universities are officially designated by education authorities among best institutions. They are granted priority in enrolling top students from applicants.

2. Students showed normal growth and development of sound health and ability of adaptability. Upon enrolment, the children were below their agemates in five of the eight physical ability indices for Beijing children. They surpassed them in all eight indices upon completing the 4-year schooling. Further, they surpassed their Japanese agemates in average records of stature, breast measurement, as well as such sports items as 50-m dash and pull-ups on the horizontal bar.

3. Excellence in science subjects. Experimental class graduates topped Beijing middle-school leavers in college entrance exams of maths and chemistry. Awards of various classes were won by the young trainees who participated 41 person-times in 11 academic contests of subjects of natural science (see Tabel 4).

It has been proved by the above that curricula for the experimental class were planned out in a scientific way, and they met the needs of the development of gifted children.

Table 1. Curricula for Experimental Class

Grades	I		II		III		IV		Total
	1st term	2nd t.	1st t.	2nd t.	1st t.	2nd t.	1st t.	2nd t.	
Political Science	2	2	2	2	2	2	2	3	286
Chinese	6	6	6	6	6	6	6	6	816
Mathematics	6	6	6	6	7	7	7	6	868
English	6	6	5	5	5	5	5	4	702
Physics	2	2	3	3	5	5	5	4	490
Chemistry			2	3	4	4	4	4	348
History	2	1	1	1					88
Geography	2	1	1	1					88
Biology	2	2	1				3	2	172
Physiology					2	2			68
Physical Education	5	5	5	5	5	5	5	5	690
Music	1	1	1	1					70
Painting	1	1	1	1					70
Headicrafts	1	1	1	1	1	1			104
Selective	Compu ter2	Comp 2	Comp 2	Comp 2	Calligr aphy1				
No. of subjects in the term	12	12	14	13	10	9	8	8	
No. of periods in the week	38	36	37	37	38	37	37	34	

Note: A and S stand for Art Students and Science students respectively. Starting with Senior II, curriculume differ in emphasis on arts and science subjects so as to prepare the students for preferred specialities at college.

Table 2. Standard Curriculums for 6-Year Middle Schools in Beijing

Grades	Junior				Senior				Total class periods	
	I	II	III	2nd t.	I	2nd t.	1st t.	2nd t.		
Class periods each week										
Subjects										
Political Science	2	2	2	2	2	2	2	3	384	384
Chinese	6	6	6	5	7	4	8	4	1208	1000
Mathematics	6	6	6	5	4	6	4	6	1000	1120
English	5	5	5	5	5	5	5	4	960	932
Physics		2	3	4		4		5	292	560
Chemistry			3	3	3	4		4	288	432
History	3	2		3			4		378	260
Geography	3	2			2	2	3		318	231
Biology	2	2			2			2	200	220
Physiology			2						64	64
Physical Education	2	2	2	2	2	2	2	2	284	384
Music	1	1	1						100	100
Painting	1	1	1						100	100
No. of Subjects each term	10	11	10	8	8	8	7	8		
No. of Class Periods each week	31	31	31	29	27	29	28	30	5676	5796
Handicrafts	Two weeks each year			Four weeks each year					576	

Note: A and S stand for Art Students and Science students respectively. Starting with Senior II, curriculum differ in emphasis on arts and science subjects so as to prepare the students for preferred specialities at college.

Table 3. Comparison of scores in entrance exams to college in 1989

	Polit. Science	Chinese	Maths	Physics	Chemis-try	Biology	English	Total score
Gifted children graduating in 1989 (average scores and success percent.)	82.9 100%	84.3 100%	88.47 100%	70.0 68.43%	79.8 100%	51.2 100%	80.1 100%	524.43
1989 graduates of senior middle schools in Western District, Beijing	81.62 97.24%	74.48 91.73%	66.72 64.44%	49.69 28.18%	52.85 38.57%	43.69 61.75%	68.82 73.50%	437.67
1989 graduates of No.8 Middle school	86.76 100%	79.41 99.28%	76.34 82.61%	58.34 51.45%	60.04 52.9%	49.12 84.78%	79.12 94.2%	488.54
Highest average score of middle school in W. District	86.52	83.24 97.67%	87.92 96.12%	63.69 63.01%	69.21 79.07%	50.14 90.08%	85.15 99.22%	525.43

Table 4 Contest awards won by gifted children

Year	Competitions	Awards of commendation
1986	National competition of computer programming	1st-Class Award Beijing City: Li Hao
1986	Western District competition of computer programming	3rd-Class Award Western District: Li Hao, Mao Zhenyu
1986	Hua Luogeng Goldcup Maths Contest	3rd-Class Award Beijing City: Li Hao, Fan Xiaoyin, Yi Qingsong
1987	M-SAT Test (U.S.)	Winners of Juvenile Mathematical Talent: Fan Xiaoyin, Wang Zheng, Ma Tao, Lo Hao, Mao Zhenyu, Lu Ding, Cao Yi, Liu Wanqian, Sun Zhizheng, Xu Guangyong, Xu Qi, Cao Qing, Yu Xiaofei, Hua Yijia, Liang Song, Li Gang
1987	2nd Physics Competition for Junior Middle Schools in Beig.	1st-Class Award Western District: Mao Zhenyu; 3rd-Class Award: Cui Qiang, Wu Guangyong Ma Tao
1987	National competition of computer programming	2nd-Class Award Beijing City and 1st-Class Award Western District: Fan Xiaoyin' Success Award Beijing City and 2nd-Class Award W. Dist.: Yu Bin; 3rd-Class Award W. District: Cao Yi, Cui Qiang
1988	National Maths Competition for Senior I Middle Schoolers in Beijing	1st Class Award Western District: Xu Guangyong
1988	National Maths. Competition for Senior Middle Schools	1st-Class Award Beijing City: Ma Tao
1988	National Physics Competition for Middle Schools	Winner of Title of Juv. Maths Talent: Wang Xinji, Chen Xi, Xing Fan
1988	M-SAT est (U.S)	