

# **Educate Body Educate Soul Educate Human**

## **-----Research on the Setting and Implementation of Gifted Children's Social Experience Courses**

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**Abstract:** Social experience courses, theoretically based on educational experience, adhering to people-orientation, adopt “special methods” aiming at “special groups” to meet the developmental needs of each student’s personality, and thus to reach the purpose of physical education, mental cultivation and individual instruction. Experience courses take the teaching mode of “4+1”, that is, four days in-school, one day out of school into nature, so that physical education is of a wider area and greater openness. Each class has four hours of physical education each week. Two hours are to complete the learning materials required by the curriculum, while the other two to complete the courses of social experience, including visiting, experiencing, practice, games, physical training and public welfare, etc. Experiments show that the students would broaden their vision and enhance physical fitness, foster self-confidence, create a good personality, train the spirit of innovation and improve the overall quality and ultimately realize “learnedness”.

### **I THE RESEARCH BACKGROUND:**

In order to adapt to the talent development needs under the new situation, make full use of the

role of scientific research promoting education, give full play to the 12 years' of developed school characteristics of Beijing Yucai School and fill the gaps of special (gifted children's) education, Beijing Yucai School and the Institute of Psychology of China Academy of Sciences have cooperated to run the school since 2005. Beijing Yucai School, by becoming the "CAS psychological institute's gifted education research base", undertaking state-level research project to "track research on gifted children's creative thinking development in primary schools", and providing for gifted children with scientific and systematic education which is suitable for their psychological development, is exploring new approaches to gifted education. In real life, many children cannot adapt to conventional school education. They often need only very little time to complete the content that the ordinary child learns in class, and after that they will do a little trick or other things with the extra time. They do not only feel bored at school, but also often impede other students and teachers. Therefore, these children often cannot be understood and fairly treated. Some of them are also considered problem children. They are considered as a problem not because of poor learning ability but because of their good learning ability. In fact, these children are not a problem, but the general education at present has not been able to take care of them well. In addition, although some children are excellent in academics and adapt well to the school, they still have the phenomenon of "knowledge hunger". And their parents feel that the content their children have learned in school is too simple compared with their ability, and they worry that the progress is too slow, that it will affect the child's interest in learning, hoping to find a more suitable way of education. Therefore, we take physical education as a breakthrough point, boldly innovating in classroom teaching, actively exploring the new teaching model under the

new curriculum standard, and establish “teach students according to their aptitude—gifted children experimental classes,” focusing on training the students’ overall quality, innovating the new curriculum of “4+1”, both four days in-school classes, one day out of the campus to experience social practice, and create a new model of physical education curriculum with unique school practice courses. “Train full-scale development and high-quality human resource” is our fundamental objective of training. Let each child fully develop their physical, social cultivation and academic scientific knowledge, so that they become members of society with comprehensive development in moral, intellectual and physical aspects to adapt to developments in the future. The students experience all the feelings and emotions in person, in practice and innovation activities, and gain connotation of knowledge, feelings, emotions and actions to evoke inner driving force needed in life.

## **II RESEARCH SUBJECTS AND METHODS**

### **(1) TIME:**

September 2005—July 2011

### **(2) SUBJECTS:**

The subjects of experimental study are the third grade students of five classes in Yucai School. It is divided into two types of classes: experimental classes and control classes, Classes 1, 2 and 3 for the experimental classes, 91 people altogether, classes 4 and 5 for the control class, 93 altogether.

### **(3) RESEARCH METHODS:**

Experimental comparative method, literature research, questionnaire method, testing

method and so on.

### **III RESEARCH FINDINGS AND ANALYSES:**

The set of social experience courses

#### **(1) CURRICULUM MODEL**

There are four hours of physical education each week. Two hours in school to complete the skills required by the course, the other two to implement social experience out of the school within one day.

#### **(2) THE COURSE CONTENT IS DIVIDED INTO FIVE MAIN CATEGORIES:**

##### **A. Category of visiting—Entering Activities**

Entering the museum: entering the history museum, the Military Museum, the Printing Museum, the Movie Museum and Railway Museum

Entering Theatre: Children Theatre, Tianqiao Theatre, workers club, concert halls

Entering the prestigious schools: Tsinghua University, Peking University, military academy

Entering modern factories: Sanyuan milk factory, Coca-Cola Company

##### **B. Category of experiencing: tree planting, simulated archaeology, picking, supermarket shopping, cooking a meal**

##### **C. Category of games: challenging domino, designing children's playground, cooperation puzzle games, finding 9 in The Temple of Heaven Park**

##### **D. Category of physical training: mountain climbing, running around Tao Ranting, swimming, hiking, orienteering, climbing trees**

E. Category of public welfare activities: charity donations, hand in hand with countryside children, settling residence for larks

**(3) OBJECTIVE:**

Based on “The new curriculum standards”, combining children’s physical and psychological characteristics to teach students according to their aptitude, undertaking the development of educational function through the local social and natural resources to reduce the distance between students and the new curriculum standard, weaken boundaries among disciplines, change the methods of organizing the curriculum simply according to logic among subjects, improving students’ comprehensive ability to understand and adapt to nature.

□ **IMPLEMENTATION STEPS OF SOCIAL EXPERIENCE COURSES:**

**(A) COURSE PLAN:**

The enacting of term plan is recommended by the subject discipline teachers, based on curriculum content. PE teachers should effectively integrate each subject, taking the student’s developmental needs as the primary purpose, the course content reflecting nature as the main form. Each semester would organize the course 16-18 times, and the third grade has taken this course more than 80 times, which has greatly increased students’ awareness of participation and ability to innovate. For example:

The arrangements of physical education in nature in the second semester of  
2006-2007 (Cheng Chi)

| Frequency | Date        | Content  | Location                              | Time       |
|-----------|-------------|--|---------------------------------------|------------|
| 1         | February 28 | 1,000 m running around the lake                      | Tao Ranting                           | Half a day |
| 2         | March 7     | Psychological testing                                | School                                | Half a day |
| 3         | March 14    | Adventure extension training in the wild             | Green base                            | One Day    |
| 4         | March 21    | Planning a tree for the green Olympics (Ant)         | Yanqing desert                        | One Day    |
| 5         | March 28    | One day's camp life                                  | Air Force 1                           | One Day    |
| 6         | April 4     | Escape training                                      | Haiding                               | One Day    |
| 7         | April 11    | Folk Exhibition                                      | Capital museum                        | One Day    |
| 8         | April 18    | Spring School  | TBD                                   | One Day    |
| 9         | April 25    | Chinese, ethics—something about constellation, stars | Planetarium hall                      | One Day    |
| 10        | May 9       | Traffic safety education                             | Xuanwu Traffic Team                   | Half a day |
| 11        | May 16      | Beijing Hutong Tour                                  | Shi chahai                            | One Day    |
| 12        | May 23      | Visiting the Coca-Cola Company                       | Yizhuang                              | One Day    |
| 13        | May 30      | Charity donation—donating sos Village (Ant)          | The rich underwater world             | One Day    |
| 14        | June 6      | My zero contact with Olympic team members            | State General Administration of Sport | Half a day |
| 15        | June 13     | Survival Island: Water World (Adventure)             | Shunyi Xiedao                         | One Day    |
| 16        | June 20     | Sand: Sand Sculpture Fort (Ant)                      | Tongzhou                              | One Day    |
| 17        | June 27     | Flexible   | TBD                                   | TBD        |

The arrangements of physical education in nature in the first semester of 2006-2007

(Li Chen)

| Frequency | Date         | Content                            | Location                   | Time       |
|-----------|--------------|------------------------------------|----------------------------|------------|
| 1         | September 6  | Develop training                   | School                     | Half a day |
| 2         | September 13 | Temple of Heaven Park              | Temple of Heaven Park      | Half a day |
| 3         | September 20 | Walking 1,000 m around the lake    | Tao Ranting Park           | Half a day |
| 4         | September 27 | Adventure training                 | Da xing Lu Ye              | Half a day |
| 5         | October 11   | Small ants                         | Small ants Club            | One Day    |
| 6         | October 18   | Picking apples                     | Suburban district          | One Day    |
| 7         | October 25   | Adventure training                 | Basketball Hall            | Half a day |
| 8         | November 1   | Small ants                         | Club                       | Half a day |
| 9         | November 18  | Visiting Xiannong Tan              | Xiannong Tan               | Half a day |
| 10        | November 15  | The World Flower Grand View Garden | South 4th Ring Rd          | One Day    |
| 11        | November 22  | Adventure training                 | Basketball Hall            | Half a day |
| 12        | November 29  | Military Museum                    | The military museum        | Half a day |
| 13        | December 6   | Visiting San Yuan Food Company     | Shun Yi                    | One Day    |
| 14        | December 13  | Watching movies                    | Children's Palace          | Half a day |
| 15        | December 20  | Adventure training                 | Basketball Hall            | Half a day |
| 16        | December 27  | Nature History Museum              | Tian Qiao                  | Half a day |
| 17        | January 3    | Supermarket shopping experience    | Da Bao necessities factory | Half a day |
| 18        | January 10   | Hot Spring Water                   | Wang zuo                   | Half a day |

**(B) CLASS PLAN I (BY EXAMPLES)**

Regardless of how precisely designed and rigidly implemented, a stylized design is,

on the one hand, lacking flexibility; and on the other hand, rigidifying our thinking. Therefore, we simplify the traditional teaching plan, emphasize after-school reflection, and correctly evaluate the effectiveness of teaching, all of which will get twice the results with half the effort. For example, in the lesson “I settle a residence for a lark”, we have arranged such sections as “making by hands, experiencing in person, building strong body, and participating in environmental protection”, which has greatly stimulated the students’ motivation to study.

(Case)

### **SETTLE A RESIDENCE FOR A LARK**

Learning stages: target level 1

Learning objectives:

- (1) Learn the right skills of mountain climbing and improving his or her leg strength.
- (2) Through the making of bird’s nest, training students’ practical ability and imagination.
- (3) Cultivate in students positive thinking to overcome difficulties and loving nature.

Study:

- (1) To make a nest for lark
- (2) Climbing mountain
- (3) Tree planting
- (4) Nest installation

Course preparation:

- (1) The assembled pieces of “home”

- (2) Understanding pagoda tree's characteristics of growth (digging a hole in advance)

#### **LEARNING STEPS:**

- (1) Two students forming a group put together all pieces of a nest and draw their own design within a specified time. Objective: learning cooperation and innovation.
- (2) Works display. Objective: to enable every student to have the opportunity of success, paying close attention to all students.
- (3) A warm-up activity, preparing the body for mountain climbing. Objective: teach the students to develop the habit of pre-exercise activities, avoiding injury, strengthening safety awareness.
- (4) Timed game of Mountain climbing, divided into groups, linking the "home" they made to the trees they choose along the way. Objective: to exercise their body, enhance exchanges and cultivate team spirit, at the same time inspire their love for nature and taking care of animal.
- (5) Learning something about pagoda trees, exploring their growth characteristics and planting trees. Objective: to extend the extra-curriculum knowledge, enhancing environmental protection awareness.

#### **AFTER-SCHOOL REFLECTION:**

- (1) Apply what they have learned: through the putting together of house pieces, copying from the real and visual life, so that students can generally understand the housing structure, edified by the traditional virtues of diligence, giving play

to the concepts of sports and practical value.

- (2) The organic integration of a variety of activities, especially the attempt of sports practice in nature, needs teachers' reasonable and effective organization and guidance, and thus give better play to initiative and creativity, having a better developing space.
- (3) As they grow up, children more strongly demand interaction with their peers and others. Learning and training in nature, it is necessary to cultivate cooperative awareness, through the activities of individual display and cooperation in companion, in the aspect of security, organization and objectives. They learn how to respect and care about their companion through discussions, which is equally important to hoping they can be respected and cared for by others, enabling students to really experience, based on common success of their groups, developing and realizing the value of self.

□ **TEACHING EVALUATION CRITERIA:**

In the process of terminal evaluation of social experience course, focusing on the evaluation of the indicators of outcome, strengthen the motivational and developmental function of evaluation, weaken its function of screening and selection, and embody it with the form of quantification, data and display of results.

**(A) EVALUATION:**

- 1, Bodily functions indicator: the ratio of height and weight, Sit and Reach, vital capacity index,

- 2, Movement skills indicators: standing long jump,
- 3, Academic lesson learning achievements indicators: the results of mathematics, Chinese, English,
- 4, Mental health indicators: students, teachers, parents' questionnaire,
- 5, Innovation indicators: the concept of innovation, desire, imagination and associative thinking and so on

### **(B) COMPARISON OF STUDENT'S HEALTH TEST RESULTS**

Table 1 The comparison of student's health test results before and after the experiment in experimental class

|        | Excellent Rate | Credit Rate | Passing Rate | Failure Rate |
|--------|----------------|-------------|--------------|--------------|
| Before | 20.53%         | 41.23%      | 36.09%       | 2.15%        |
| After  | 24.98%         | 47.46%      | 27.56%       | 0            |

Table 2 The comparison of student's health test results before and after the experiment in control class

|        | Excellent Rate | Credit Rate | Passing Rate | Failure Rate |
|--------|----------------|-------------|--------------|--------------|
| Before | 20.01%         | 40.96%      | 36.09%       | 2.94%        |
| After  | 21.27%         | 41.37%      | 37.36%       | 0            |

Content: the ratio of height and weight, Sit and Reach, vital capacity index

### **(C) COMPARISON OF SPORTS SKILLS RESULTS WITH DIFFERENT TEACHING METHODS**

Table 3 The comparison of the results of the same content (standing long jump) under two means of teaching:

| Class                               | Experimental Class           | Control Class                |
|-------------------------------------|------------------------------|------------------------------|
| Teaching Method                     | Group learning               | Traditional teaching methods |
| Teaching content                    | Standing long jump           | Standing long jump           |
| Students' interest in participation | 98% pleased                  | 87% pleased                  |
| Students' willingness to display    | 89                           | 80                           |
| The quality of action completed     | 87 students with outstanding | 70 students with outstanding |
| Class average score                 | 1. 46m                       | 1. 32 m                      |

Group learning has increased the exchanges between individual and individual, individual and group, group and group, students and teachers. The students have many more opportunities to show their skills than the traditional teaching methods. It focuses on the students' ability to express themselves, do thing by themselves, think and cooperate, making up each other's deficiencies and making progress together.

#### **(D) COMPARISON OF STUDENTS' ACADEMIC RESULTS**

Table 4 The comparison of average scores of Chinese, mathematics and English at the

end of 2007 between experimental class and control class

| Subject     | Experimental class | Control class |
|-------------|--------------------|---------------|
| Chinese     | 95.6               | 88.7          |
| Mathematics | 97                 | 87            |
| English     | 90.3               | 82            |

Under the condition of the same examination papers and time, the scores of the three subjects in experimental class are higher than those in the control class. The average score of Chinese is 6.9 higher, the mathematics 10 higher and English 8.21 higher, which is of great significance. This shows that: social experience courses will, to a certain degree, improve the students' academic learning.

#### **(E) PSYCHOLOGICAL QUESTIONNAIRE RESULTS:**

The questionnaire related to experience courses shows that:

- 1, 85% of people did not participate in or had occasionally participated in such activities before they entered the experimental class.
- 2, 100% of people are very willing to participate in this activity.
- 3, The support rate of parents rsse from 99% to 100%.
- 4, 100 % of students think their will is trained in participating in these activities, 89.7% think they exercise more.
- 5, 100% of people think comprehensive capacity increased in the activities; 99.7% of the people think their capacity has greatly improved.

Students' evaluation on the effects of experience courses

|  | YES % | NO % | Uncertain % |
|--|-------|------|-------------|
|--|-------|------|-------------|

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|  |      |      |      |
|--|------|------|------|
| 1. Very happy with physical education in nature              | 60.3 | 11.2 | 19   |
| 2. There is enough sports in physical education in nature    | 30.2 | 33.6 | 36.2 |
| 3. Have memorable sports experience                          | 41.4 | 12   | 45.7 |
| 4. Learn some new knowledge                                  | 18.1 | 31.9 | 50   |
| 5. Is there any new understanding                            | 15.5 | 44.8 | 39.7 |
| 6. Able to learn and communicate                             | 21.6 | 42.3 | 23.3 |
| 7. Have expectations for physical education in nature        | 49.1 | 25.9 | 16.4 |
| 8. Help each other and learn in physical education in nature | 25.9 | 47.4 | 13.8 |
| 9. Like physical education in nature very much               | 25.9 | 48.3 | 25.9 |
| 10 . Feel very happy with physical education in nature       | 47.4 | 35.3 | 17.3 |

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As for the options listed in the above table, most students think that physical education are of great importance both in physical and mental development. It reflects the good effect of physical education in nature in primary school.

## (F) COMPARISON OF THE ABILITY TO INNOVATE

Table 5 Statistics on the basic innovation quality in experimental and control class before the experiment

| Class                              | Experimental class | Control class | T (Test) | P      |
|------------------------------------|--------------------|---------------|----------|--------|
| Concept of innovation              | 82.53              | 81.87         | 1.831    | P>0.05 |
| Desire for innovation              | 76.31              | 76.12         | 0.616    | P>0.05 |
| Capturing innovation opportunities | 83.12              | 82.96         | 1.58     | P>0.05 |
| Interest in innovation             | 83.61              | 84.02         | 1.284    | P>0.05 |
| Ability to innovate and imagine    | 84.56              | 85.19         | 1.529    | P>0.05 |
| Ability for associative thinking   | 84.31              | 83.89         | 1.465    | P>0.05 |
| Ability for divergent thinking     | 83.52              | 84.08         | 0.52     | P>0.05 |

Table 6 Statistics on the basic innovation quality in experimental and control class after the experiment

| Class                              | Experimental class | Control class | T (Test) | P      |
|------------------------------------|--------------------|---------------|----------|--------|
| Concept of innovation              | 86.19              | 82.19         | 3.576    | P<0.05 |
| Desire for innovation              | 82.40              | 79.23         | 2.869    | P<0.05 |
| Capturing innovation opportunities | 84.16              | 83.13         | 2.576    | P<0.05 |
| Interest in innovation             | 86.48              | 84.93         | 2.375    | P<0.05 |
| Ability to innovate and imagine    | 87.21              | 85.76         | 2.483    | P<0.01 |
| Ability for associative thinking   | 86.43              | 84.14         | 2.437    | P<0.05 |
| Ability for divergent thinking     | 86.95              | 84.26         | 2.665    | P<0.01 |

After more than two years of undergoing the teaching experimental research, the experimental class and the control class are greatly different. Students in experimental class have improved in the aspect of sense of innovation and practice. See table 5 and 6:

Table 5: On the basic innovation quality in experimental and control class before the experiment, the difference in the test results before the experiment was not statistically significant. ( $p > 0.05$ ). This shows that the basic innovation quality in experimental and control class before the experiment are at the same level. The results were significantly different ( $p < 0.01$ ) after the teaching experiment. The results of experimental class, in particular the concept of innovation, were markedly improved. This shows that: under the guidance of the theory and methodology of innovative thinking, through innovating and creating teaching activities and the changing of teaching methods, students' way of thinking

and ability has changed.

□ **CONCLUSIONS AND RECOMMENDATIONS:**

- (A) Social experience courses have enhanced the overall quality of the students and at the same time also helped teachers improve the quality of professional ethics, and a new teaching model that mutually benefits teachers and students is realized.
- (B) The experiment shows that through the implementation of social experience courses, the students' bodily function, sports skills, psychological quality, ability to adapt to the society and academic learning achievements are better than their peers', which verifies that sports is not only the foundation of one's morals and intellect, but also an effective means and important way of realizing both intellectual and moral education, i.e. physical education, mental cultivation and individual instruction.
- (C) Propose to promote social experience courses to enable the students to get close to nature as early as possible, understand nature, adapt to nature, and love nature, and they can have full development of physical and mental health, becoming learned and high-quality people.

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