Science Education in public special school in Nanjing

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Aims and business scope:

supervise teaching research, curriculum plan, teaching method, teaching quality, teaching resources, teacher development and student competition.
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An overview of special education in Nanjing

- There are thirteen public special schools in Nanjing, including a school for the deaf, another for the blind; and the other eleven schools for mental retardation.

- The trend is that deaf and blind children in special Schools are in the reduced meanwhile children with mental disabilities, especially autism in this kind of schools are on the rise.
An overview of special education in Nanjing

- Two thirds of children and teenagers with a disability in Nanjing study in the separate special schools.
- The other children and teenagers with mild disabilities in Nanjing are studying in regular classes and regular schools.
- This figure, actually, is not very accurate.
Science education in special schools for students with visual and hearing disabilities

1. Referring the national curriculum for regular schools to set the standards and contents for special education
Why do we choose the same curriculum standards and textbooks?

- Firstly, it can confirm the same quality in the teaching requirement.
- Secondly, it can ensure that teachers in special schools can communicate with the ones in regular schools based on the common level.
Physics teaching and research activities in Nanjing blind school
Teachers from regular schools are discussing the teaching methods with the teachers from special schools.
Science education in special schools for students with visual and hearing disabilities

1. Referring the national curriculum for regular schools to set the standards and contents for special education
2. Adapting teaching according to defects and special needs
Adapting teaching according to defects and special needs

- Teachers need to plan rich and colorful social practice in order to practice their living abilities, meanwhile try to use the rest of students’ sensory system to compensate their visual or hearing defects.
Students in deaf school have been collecting and analyzing water sample taken from Yangtze River.
Science knowledge contest
Organized by Nanjing deaf school
Visiting science and technology palace.
The driver of Nanjing blind school has been directing a student to experience a new-energy car displayed in the science and technology palace.
This student with poor sight has been explaining the color of a maple leaf to the totally blind students.
This blind student has been looking for rust on campus——she groped rust and took a smell of rust to feel what is rust.
This blind student has been exploring the shelves of an air conditioner outdoor. Based on this, he can learn that the triangle structure holding the air conditioner is the most stable.
This blind student has being recognized the voice he took a record by a cameral.
The biggest difficulty that teachers encountered in the teaching process is there has no enough or proper teaching resources can be applied into teaching blind students.
• A lot of teaching materials have been taught to the blind students only by teacher’s reading due to these materials have not been in Braille.

• Many experiments which have been designed or prepared the materials by teacher own based on student special needs.
Science education in special schools for mental retardation

- more and more the students with severe disabilities have to study in special schools. These students have the problems not only on mental retardation, but also on emotional behavior, social interaction, etc.
- it is hard for them to learn systematic science knowledge.
• In 2007 the Ministry of Education of People’s republic of China issued, "Compulsory Curricula Implementation Programmer for Mentally retarded School ", emphasizing the core of curricula for this kind of schools is dairy life education.
• we have adjusted the educational goal for Mentally retarded schools in Nanjing, which divided into three levels for children with disabilities: to be a qualified citizen, be to a good help for his own family, or to be a good care-recipient.

• On the other hand, we have changed the discipline-based teaching to the theme-based teaching, which science education has been integrated into theme-based teaching around daily life needs.
What is the theme?

1) Knowing myself
2) My family
3) Happy campus
4) Harmonious community
5) Dressing and Etiquette
6) Sports and health
7) Healthy diet
8) Seasons and Holiday
9) Magic nature
• The theme is just a general scope for students learning, it always has very closed relationship with daily life. In the mentally retarded schools, there has a theme to be learnt by students every three or four weeks. The actual learning content and standard for every grade, always have been depend on students’ abilities.
• Where is science education in the theme–based teaching?
In the autumn
1) Campus in the Autumn. Through observing the changes brought by the autumn in the campus such as leaves, grass, teachers or classmates’ clothing, students experience the Autumn.
2) Getting knowledge on leaf’s structure
And
making specimens of leaf veins.
• 3) Reading the poets related to the Autumn, and then mastering the characters in detail.
• 4) Based on the changes of leaves and winds, learning to choose proper clothing.
5) Mathes activity: buying a cap.
6) Making fruit salad
• How to carry out science activities in the theme-based teaching?
Animals in the water — visiting Nanjing Underwater World.
• The preparations includes that they'd better wear comfort clothes and shoes, bring the tissues, know about the transportation they would take on, drink water or take a toilet before their departure, and keep a nice mood.
• During the students’ visit, based on their abilities, they would be divided into three groups, and every group has their own targets as follow:
• Students preferred to participate in this kind of integrated practice activity. They obtain not only science knowledge, the ability on obverting, sorting, comparing, taking record, but also social skills.
• the outstanding problem is the teachers are limited in both quantity and quality.
• The teachers who are in special education area have to master including education, specific subject, and a bit of knowledge on medicine and psychics, etc. Besides, teachers should estimate accurately the ability of students, know student family well and serve student parents.
After, improving teachers’ teaching profession and ability is a key factor for children’s education. We are committed to enhance this in future.
Thank you