

# 4-year-old programmers shine in robot contest

Children take part in an educational robot contest in Shanghai, March 4, 2017. [Photo/Shanghai Observer]

A total of 100 pre-school children recently took part in an educational robot contest in Shanghai, with the youngest contestant only 4 years old, according to Shanghai-based newspapers.

More than 1,000 contestants, usually in teams of two or three, competed in the educational robot match. Their ages ranged from 4 to 18 years old, with 100 of them being pre-school children. Clad in uniformed yellow vests, they were seen piecing their robots together or working on computers to do programming to get the robots going.

Yu Shengming, 4, is one of the contestants. He worked with 6-year-old Yi Yang. They had to assemble a machinery vehicle using plastics and metal parts, and afterwards did some programming to get the vehicle along a designated route to hit ping pong balls and then come back. The two accomplished the task easily.

Another kindergarten child, Dai Kuncheng, told the Shanghai Morning Post that he hasn't learned writing yet but has already learned something about programming and can recognize programming-related and video game-related characters, touting jargon like "main program" and "reference variables."

The newspaper quoted a judge surnamed Zhang who said such contests used to attract children from 10 to 15 years old, but now an increasing number of younger kids are taking part. A report last year revealed there are about 7,600 robotics educational firms in China, a 15-fold increase over the past five years. Some companies, like Lego, charge nearly 10,000 yuan (about US\$1450) per year for training and more than 100,000 yuan for the entire learning process.

The newspaper quoted some educators who argued against pre-school children learning programming as they believe young children shouldn't focus too much on intellectual training, and that long exposure to computers will hurt their eyes. But some educators argue that as times have changed, their interests change too.

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# Saving China from 'cancer of the Earth'

A bird's-eye view of Babusha, a large sand dune on the southern edge of the Tengger desert in Northwest China. [Photo/China Daily]

The government is promoting measures to eradicate desertification, one of the most-pressing problems facing China's western regions, and looking to reclaim vast areas of land. Su Zhou reports from Beijing with Xue Chaohua in Lanzhou. In January, 65-year-old Guo Wangang took over his father's job. His work is of national importance, but he isn't running a giant corporation; instead he is guarding the Babusha Forest Farm in Gulang, a county in the northwestern province of Gansu.

In the 1970s, Babusha, an enormous sand dune on the southern edge of the Tengger desert, gradually encroached south, threatening the county's social and economic development and the livelihoods of the people who lived there.

"Rather than bow down to the desert's advance and become ecological refugees, six local farmers, including my father, Guo Chaoming, decided to plant trees to improve soil absorption and prevent the spread of the desert by fixing the sand in place," said Guo Wangang, who is head of the farm. "They did it all voluntarily, despite the fact that they could not even feed themselves at the time."

After three decades, the combined efforts of two generations have paid off. The desertification of the 75,000-square-meter area has been reversed and Gulang has once again become a vibrant forest farm, where produce is grown and sheltered under a canopy of greenery. The dramatic change has prompted more than 30,000 people from the surrounding areas to settle in the once-threatened county.

## Shrinking deserts

The Guo family's story is a microcosm of China's lengthy battle against desertification, often described as "cancer of the Earth". It is the most serious ecological issue facing China, especially in western areas such as Gansu and the Ningxia Hui, Inner Mongolia and Xinjiang Uygur autonomous regions.

According to the latest survey by the State Forestry Administration, the areas affected by desertification and sandification – where the top soil has been stripped away and replaced by sand – are shrinking.

By the end of 2014, the area of desertified land nationwide had fallen by 12,120 square kilometers to 2.6 million sq km, and the area of sandified land had retreated by 9,902 sq km to 1.7 million sq km.

China has vowed to step up efforts to tackle desertification and land degradation and the government plans to reclaim 100,000 square kilometers of

sandified land by 2020.

In recent decades, the country has gained rich experience of combating desertification and is now an international leader in the field.

Shapotou, a district of Zhongwei, a prefecture-level city in Ningxia, first hit the headlines not because of tourism, but as a result of successful innovations in desertification control, said Wang Fuzhong, chairman of the Ningxia Shapotou Tourism Industry Group.

He recalled that many tourists from overseas were eager to visit Shapotou in the 1970s and 80s because it was the birthplace of the now globally renowned "straw checkerboard" technique, in which straw, usually made from wheat or rice stalks, is laid out like a grid across the sand and then partially buried.

"The checkerboards have remarkable properties – acting as windbreaks and helping to keep dunes in place, thus allowing topsoil to form. When a sufficient amount of soil has been established, drought-resistant plants can be grown," he said. Liu Shizeng, director of the Gansu Desert Control Research Institute in Lanzhou, the provincial capital, said China originally adopted anti-desertification measures used in the former Soviet Union, but quickly started exploring its own techniques.

"In addition to improving anti-desertification techniques that were adopted in different geographical circumstances, we also encouraged the control of desertification through the development of local businesses, such as those that plant shrubs and dune plants to fix the sand in place and prevent major shifts. This has encouraged more locals to participate," he said.

According to Tian Zhiguo, deputy head of Pingchun, a county in Gansu, before the development of the dune plant industry, local residents rarely played an active role in tree planting.

"The cost of planting trees in deserts is very high, and once planted, the trees were not allowed to be cut down for sale. So, it made sense for them not to participate," he said. "Now, with plant farms generating profits, the locals are more willing to join the campaign."

#### National desert parks

Liu said years of research have resulted in the maturation of technologies that enable the large-scale domestic cultivation of wild plants, such as Asian onions. Moreover, homegrown techniques have already provided support to the development of the "sand industry" along the Hexi corridor, a fertile region which provides most of the crops grown in Gansu.

"Another good example is the founding and construction of national desert parks, which provide effective management of deserts and maximize their value," he added.

Since August 2013, the State Forestry Administration has approved 70 pilot projects for national desert parks and has pledged to build 170 by 2020,

accounting for 2.4 percent of the estimated area of sandified land that can be reclaimed across the country.

Liu has been dealing with deserts for more than 30 years. At first, he regarded them as essentially dangerous places because they can destroy people's lives and livelihoods.

Now, he has changed his mind: "Just like the ocean, a desert is a natural landscape. Not all of it is dangerous to humans."

Wang Zengji, deputy head of the forestry bureau of Yanchi county in Ningxia, said combating desertification does not equate to "eradicating" deserts.

"Instead, it is the management of desertified land caused by human activities," he said.

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## Passengers subdue man on airplane

Passengers aboard an Ethiopian Airlines jetliner on Saturday helped subdue a man attempting to break into the cockpit as the aircraft flew to Beijing from Addis Ababa, the capital of Ethiopia.

Aviation Industry Corp of China said on Monday that one of its employees, Cao Hongguo, who was a passenger on board Flight ET604, was the first to restrain the suspect, according to a news release and a video interview of Cao sent to China Daily by the State-owned aviation giant.

More than 200 passengers on the flight have returned safely to Beijing, though they were delayed for several hours as the Boeing 777 had to make a stop at the Allama Iqbal International Airport in Lahore, Pakistan. The man was transferred to police at the airport.

Ethiopian Airlines did not immediately respond to a request for comment on Monday.

Cao, 37, is a senior project manager at AVIC-INTL Project Engineering Co, a subsidiary of AVIC, who oversees a water supply project in Karimenu, Kenya. He was returning to his home in Henan province to take care of his pregnant wife.

Cao said that about five hours into the flight, one of the crew members rushed into the economy class cabin and called for help. Cao followed the stewardess to the first class cabin and saw a strongly built man fiercely hitting the cockpit door, according to the news release from AVIC.

Cao tried to restrain the man, who struggled against him. Two other passengers and four stewardesses then jumped in to help.

The struggle lasted about 20 minutes with the alleged attacker ending up being tied up using headphone wires, Cao said in the video interview.

The video shows Cao with slight facial injuries.

“I don’t think it’s a big deal that should be taken as the action of a ‘hero’. I didn’t think about it at the time. I just took action when I heard someone calling for help,” he said.

Kenneth Pellegrino, captain of the ET604, attached a handwritten letter to the news release from AVIC certifying Cao’s actions, saying “he was instrumental” in helping handle the incident.

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## Beijing suspends all coal-fired power generation

The last large coal-fired power plant in Beijing has suspended its operations on March 18, meaning that the capital has become China’s first city to have all of its power plants fueled by clean energy.

“This is a historic moment, because we now bid farewell to all coal-fired power generation plants in Beijing,” said Cai Qi, the city’s mayor, as he visited the power plant owned by Huaneng Group.

“Replacing coal with clean energy not only deals with air pollution but is also a requirement of the company’s transformation,” said Cai, adding that the new power plant, which is under construction and will start operating soon, will use natural gas.

The shutdown of the plant will cut coal consumption by 1.76 million tons a year, and reduce sulfur dioxide emissions by 91 tons, oxynitride emissions by 285 tons and dust by 110 tons.

According to Beijing’s Clean Air Action Plan (2013-2017), the total coal consumption should be 13 million tons less by the end of this year, compared with 2012.

The plan also says that the city will build four gas thermal power centers and shut down the four large coal-fueled thermal power plants during that period. Three of the four gas thermal power centers have already been built and are in operation.

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# Beijing's new airport terminal capped

As the last pouring of concrete was finished on March 16, Beijing's new airport terminal had its concrete structure capped, meaning the completion of the main structure of the terminal towards steel structure installation next.

The new airport project got started a year ago. Now the main body of the five corridors connected to the main terminal has been completed, and a phoenix opening its wings has taken shape.

Right in front of the boarding gate for international flights is a sunken area, which will be a 2,000-square-meter garden showing Chinese culture and characteristics such as the silk, tea, china, landscape and classic garden. The five corridors all embrace such a display.

The main body of Beijing new airport terminal, based on cast-in-place reinforced concrete frame and space truss system structure, requires sophisticated technology and techniques. The next step will move on to space truss to be erected on the main structure with all-metal curtain wall, which will be completed by the end of this year to ensure that the new airport can be put into operation in 2019.

The main terminal building shaping radial corridors makes it convenient for passengers to walk from the center to the farthest boarding gate within 8 minutes.

The new airport is about 46 kilometers straight from Tiananmen Square. Beneath the terminal building will be a huge rail transit station, where high-speed rails, subways and intercity railways will cross underground.