

## Teaching Recycling in Factories

Written by Li Wei-huang  
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In the past year, nearly 20 companies in the greater Shanghai area have started recycling programs in their factories. Such factories have been turned into real-life classrooms that teach employees and employers alike--some for the first time--about environmental protection. People who take the classes then become practitioners of and messengers for the cause of environmental protection.

Taiwanese business owners are enthusiastically leading the way in this movement, setting an example as responsible stewards of the earth. But the earth isn't the only beneficiary of such programs. Reducing garbage, as it turns out, also reduces the operating costs of the companies. It just goes to show that when it comes to protecting the earth, everyone wins.



Booming economic growth has brought prosperity to the most populous nation on earth. But an increase in prosperity has also resulted in an increase in environmental pollution. China used to be able to "spread and hide" its pollution across its expansive landscape, but those days are gone. Yu Bing-yu (俞秉宇), who has been involved with garbage disposal and environmental engineering for over 25 years, puts China's garbage problem into perspective: "With almost one fifth of the world's population, China produces an inordinate amount of trash. Imagine the garbage produced if each of its residents throws away even just one piece of garbage! As their incomes rise, so does their consumption. Consequently, the amount of garbage produced in China has been increasing by 16 percent per year." At this rate, the amount of garbage produced will double in just under five years!

The enormity of China's garbage problem has spawned a new and rapidly-growing recycling industry. Companies engaged in various aspects of recycling continue to pop up. Such companies feed on the materials collected by the increasing number of individual scavengers who patrol the streets or comb landfills for recyclable garbage."

The saying, "Where there is a will, there is a way" has been proven true many times over by scavengers willing to go to almost any length to find recyclable materials. Some sift through trash cans; some wait beside the stalls of beverage vendors for cast-offs; some excavate old construction dump sites and chisel away cement blocks for the steel bars inside; some even use metal detectors to help them pinpoint their excavation efforts. High tech, low tech, or no tech--you name it and someone probably has tried it to get ahead in this game.

While these individual activities help slow the fill-up of landfills, they are not enough. Individual scavengers only collect items that pay the most money: iron, aluminum cans and metal wire. They don't bother with materials that are equally recyclable but fetch little or no money. Such overlooked items usually end up in landfills or incinerators, creating more problems. Either they take hundreds or thousands of years to decompose or they discharge toxins into the environment. Something else must be done to address the problem of non-paying recyclables.

### **A China-sized opportunity**

Tzu Chi volunteers want to be agents of change. They want to help people change their

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mindsets and their resulting behavior. They want to ingrain the idea of “reduce, reuse, and recycle,” so deeply in people’s consciousness that they will naturally and cheerfully pick up recyclable garbage--not because it is profitable, but because it is the right thing to do.

To start, the volunteers chose to approach companies whose owners come from Taiwan. “we can reach hundreds of people at a time if we promote our ideas at a factory,” noted Qiu Li-mei (邱麗梅), a Tzu Chi volunteer who works for one such company. There are thousands of such companies in the greater Shanghai area--4,000 in the city of Kunshan alone and 1,000 in Jiading.

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### At the factories

At barely seven in the morning, the Kunshan Export Processing Zone in Jiangsu Province was already bustling with activity. Workers arrived mostly on foot or bicycle. At one factory, instead of starting their shift at their usual work stations, employees assembled to attend a class. Several uniformed Tzu Chi volunteers greeted them.



The volunteers kicked off the informational session on earth-friendliness with a group activity. Ten workers were asked to step up to the front of the class, where they were given headbands to wear. Labels on the headbands identified each wearer as a type of garbage: a plastic bottle, tissue paper, disposable bamboo chopsticks, an aluminum soda can, a battery, old clothes, etc. The participants were then asked to sort themselves between two additional volunteers who were holding placards that said, “Recyclable” and “Non-Recyclable.” Some workers quickly found the correct home with confidence while others hesitated, unsure as to whether they were recyclable or not. Everyone laughed as they warmed up to the presenters and the topic.

For the next two hours, employees, bosses, and volunteers learned all of the compelling reasons to recycle. Some interesting statistics were presented: For every 50 kilograms (110 pounds) of paper recycled, a 20-year-old tree is saved from being cut down; a reclaimed aluminum can saves enough energy to run a TV set for three hours, or about 1.9 liters (half a gallon) of gasoline; a small battery buried in the ground poisons the cubic meter (35 cubic feet) of soil surrounding it so thoroughly and irrevocably that the soil’s productivity is obliterated forever. These surprising facts marveled many in the audience, and caught some of them off guard. They were stunned to learn how intertwined their everyday life was with the well-being of the planet.

Turning factories into classrooms for environmental education is gaining popularity among the Taiwanese companies in the greater Shanghai area. Qiu Li-mei encourages her fellow expatriates to support the campaign to bring environmental protection into their factories. More and more of these companies are now offering such training to their employees.

The two-hour sessions are conducted on company time when the production assembly lines are

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shut down. Volunteer Xu Juan-juan (徐娟娟) expressed her gratitude to all the participating companies and their owners. It takes a big heart to shut down income-generating production lines and pay the workers to attend these informational sessions.

The training sessions in the factories are producing real results. Hundreds of workers at a time are transformed after each two-hour session into better stewards and spokespersons for the earth. It is all the more heartening to know that some of the new converts, particularly those from the more outlying areas of China, are for the first time hearing phrases like “environmental protection” and “global warming.” What’s more, many companies set up on-site recycling programs on the heels of the sessions.

### The partial honor roll

As workers become more mindful of resource conservation, they tend to become better employees. They squander less and become more productive and efficient users of company resources. This is good for the company’s bottom line, saving money in the long run. It’s a win-win situation for the company and the earth.



Jiang Yu-zhen (江玉珍) owns a women’s lingerie factory. She wants to instill the importance of frugality in her workers, so she is willing to halt the assembly line for a couple of hours to deliver the message in the informational sessions.

Du Ming-shu (杜明舒) has a die factory at Kunshan. Each month, he collects six tons of cardboard that he in turn sells to third parties. He puts half of the proceeds into a benefit fund for his employees and donates the other half to Tzu Chi to put needy students in China through school.

Several employees at a factory owned by Huang Mao-sen (黄毛森) have become much more earth-friendly. Wang Chengyi (王 Chengyi), an IT section chief, used to throw away the packaging and the plastic bags from his carry-out breakfasts. Now he sorts and deposits his trash into appropriate receptacles for recyclable materials. Wang Dequan (王 Dequan), the director of general affairs, sees the benefits of sorting recyclables in dollars and cents: “We used to sell all our recyclables unsorted in one large chunk. Now we sort them out and sell them separately. We are able to pull in an extra 2,000 yuan [US\$290] a month this way.”

Xiao Yi-zhen (姚伊珍) is a Tzu Chi volunteer and owner of a factory in Jiading. He holds the honor of being the first in Jiading to open his factory to Tzu Chi to set up a recycling station. Last year, that recycling station was moved to Huang Mao-sen’s factory, also in Jiading.

Both Xiao and Huang come from working-class families of modest means. Both only finished junior high school and then worked as apprentices in manual trades. They can therefore readily identify with the destitute families in China that desperately need a helping hand. They joined Tzu Chi as volunteers, and their love has spilled over to environmental protection.

Factory and company owners like these encourage their employees to get involved. Many of

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them, bosses and employees alike, show up at the Tzu Chi recycling station at Jiading on the monthly recycling days to sort out recyclable garbage. Ye Rui-ming (叶锐明), another business owner, saw that many of his fellow entrepreneurs were leading their employees and families to volunteer there. He saw how volunteers handled garbage, got their hands dirty, sweated through their shirts--and yet seemed quite cheerful doing the tasks at hand. On his first visit to the station, he asked himself, "If they can do it, why can't I?"

Ye decided to get his own family and employees to join the cause. He and his family have volunteered on the monthly recycling days ever since. His employees now recycle at the factory, too. Their efforts have paid off handsomely. The five big buckets of trash that the factory used to generate in a week have now been reduced to three--a boon to the company and the earth.

To sum up, here we have witnessed entrepreneurs who have brought their own convictions to their circles of influence and thus greatly expanded the effects of their love for the earth. Through their patronage, green seeds have been sown in the minds of their workers. They will in turn plant additional green seeds in the minds of their friends and families.

This chain reaction--the multiplier effect--can do wonders for a cleaner world. And here is the best news: Anyone can start and be the head of a new chain reaction. So, go ahead and indulge yourself. Use **China's Green Card**

Population: over 1.3 billion

Number of plastic bags used per day: more than three billion (Because of the large number of plastic bags used, a government policy has been implemented to impose limits on the use of plastic bags starting in June 2008.)

Carbon dioxide discharged per person per year: 4,070 kilograms (8,954 pounds) as of 2005

Garbage generated: 150 billion kilograms (165 million tons) countrywide, or about .32 kilogram (.7 pound) per person per day

Garbage recycled: 20 percent

Government recycling policy: "Green strategy." Environmental protection is changing from the down-stream, after-the-event management of the past to today's whole-process supervision and control.

Monetary investment in recycling: 1.24 percent of gross domestic product

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