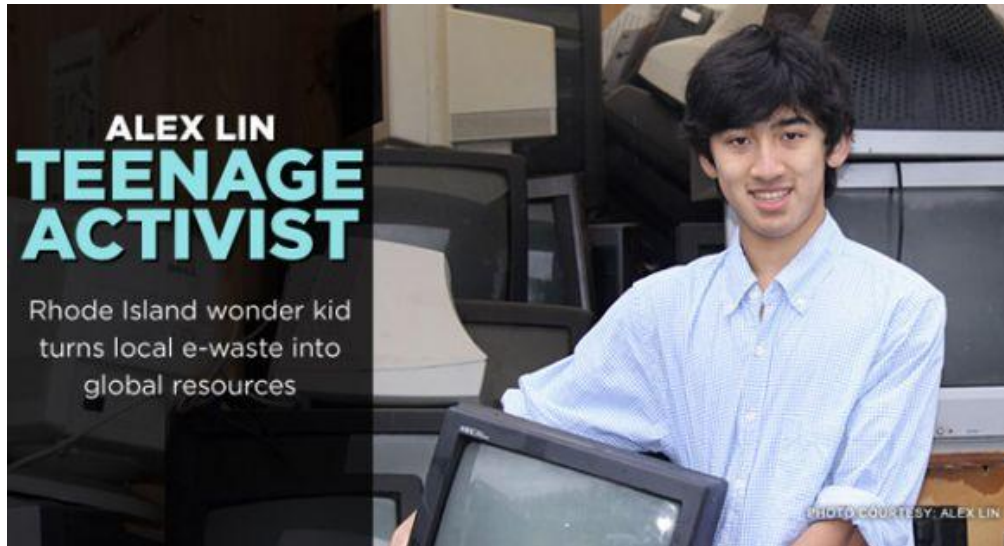


Alex Lin, Teenage Activist

April 05, 2010 By *Salvatore Cardoni*



He's overseen the recycling of 300,000 pounds of e-waste. He's successfully lobbied the Rhode Island state legislature to ban the dumping of electronics. He's used refurbished computers to create media centers in developing countries like Cameroon and Sri Lanka to foster computer literacy.

He's Alex Lin and he's just 16 years old.

"I don't see anything uncommon in it," says Lin, a high school senior from Westerly, Rhode Island. "My friends and I have been doing this since fifth grade. It's become part of our lifestyle."

Lin's catalytic moment came in 2004 when he chanced upon a *Wall Street Journal* article. "It first alerted me to the e-waste problem, and warned of an e-waste tsunami to come."

E-waste, or electronics garbage, is the fastest growing section of the U.S. trash stream. In 2007, Americans discarded more than 112,000 computers daily, according to the Environmental Protection Agency. Even worse, just 18 percent of discarded televisions and computer products were collected for recycling.

While there is no federal law banning e-waste, 20 states have passed legislation mandating statewide e-waste recycling.



Alex Lin, third from right, has taken e-waste matters into his own hands. Photo: Courtesy Alex Lin

The Rise of E-Waste, the Birth of Team WIN

Almost all electronic devices contain varying amounts of hazardous chemicals and heavy metals—lead, mercury, and cadmium being among the most deadly to the human body.

"When improperly disposed of—i.e. dumping, burning, etc.—these chemicals can seep into the surrounding environment, harming humans, crops, and ecosystems," says Lin. "With the advent of the computer in the 1970s, electronics use has increased exponentially, bringing with it ever-increasing amounts of waste. In the majority of the world, this waste is improperly disposed of, resulting in untold damage to the environment."

Reduce, reuse, and recycle. These are the so-called 3Rs of eco-friendly behavior. To start, Lin and his student-led community service team, Westerly Innovations Network (WIN), concentrated their efforts on recycling.

"We worked with Metech International to hold an e-waste recycling drive that collected over 21,000 pounds of electronics," says Lin. With assistance from a private recycling company and the municipal government, they established a permanent receptacle that collects up to 5,000 pounds of e-waste per month, and more than 300,000 pounds to date.

However, once Lin and his team discovered that reusing computers was much more efficient than recycling, they decided to create a computer-refurbishing program. "To make this sustainable," says Lin, "we worked with the Westerly School System to incorporate computer refurbishing into the A+ Certified Computer Repair class's curriculum."

More than 300 refurbished computers were donated to low-income students without home computer access. "It was an eye-opening experience," says Jeff Brodie, 16, of the moment when he, Lin, and other WIN teammates walked into one Westerly residence to set up a computer. "The kids were running around very excited."

A Field Trip to the State House

Mission accomplished, right? Not quite. Lin's e-waste eradication efforts were only ratcheting up. "We recognized that the true sustainability of our project lay in legislation," says Lin. Through research, they learned of an e-waste bill that had been in the works for years in Rhode Island.

Seizing on the opportunity to translate their local success into the language of a state law, Lin and his team met with Arthur Handy, the state representative sponsoring the bill, and testified before both the House and Senate Environmental Committees. "He came across very well," recalls Handy of Lin's presentation as an 11-year-old. "They were clearly well prepared and had clearly thought the issue through."

The bill, however, did not pass. "We were all disappointed; we had put in all this time and they didn't listen to us," says Brodie.

"Looking back at what might have gone wrong, we came to realize that bill was too complicated," says Lin. To combat this, they drafted a local ordinance encompassing all the positive points of the law. "It was simple: ban e-waste dumping," says Lin.

This go-round, Lin and his WIN Team sent out thousands of fliers, made radio announcements, wrote articles for local newspapers, and made presentations in front of both student and town council audiences. Handy says he was impressed that Lin had not given up after the failure of the first bill. "It showed that it was not just a school project," says Handy. "It showed that it was something he had a passion for."

Local media got wind of the story and helped spread the word to more than a million people in the greater Westerly area. "The biggest challenge against progress is simply awareness," says Lin. "When my team and I first surveyed our town, only 12 percent of the residents knew how to properly dispose of e-waste."

The Law of the Land

Fast-forward to October 28, 2005—the day local officials in Westerly unanimously passed Lin's e-waste ordinance. "It was then proposed as a bill to the State House," says Lin. "This time we brought a petition with 400 signatures and again testified before both the House and Senate. Bill H7789 passed on July 6, 2006."

It is now illegal to dump electronics in Rhode Island. Proudest of all might be Lin's father, Jason, 47, an engineer who served as the team's mentor. "It was a tremendous amount of work," he says with a chuckle.

The bill set the stage for more comprehensive legislation that passed in 2008. "Now Rhode Island requires manufacturers to take back their computers and televisions, and to pay for the collection and recycling of them," says Sheila Dormody, the Rhode Island Director for Clean Water Action, a nonprofit environmental advocacy organization that worked with Lin.

The youth activist awards were piling up nearly as fast as the heaping piles of e-waste were vanishing. In 2005 alone, WIN won first place at the Community Problem Solving Competition, third place at the Volvo Adventure Competition sponsored by the United Nations Environment Program, and a gold prize at the Christopher Columbus Awards.

Scaling Up

As Lin crisscrossed the country and the globe attending these award ceremonies—from Lexington, Kentucky, to Gothenburg, Sweden; from Orlando, Florida, to Aichi, Japan—he came up with the idea for WIN's next e-waste endeavor.

"Cooperating with satellite WIN Teams that we established through connections made at conferences and competitions, we have worked to create media centers in areas in need of information technology," says Lin.

And like that, the WIN Network went global.



A teacher in Sri Lanka uses refurbished computers from Alex Lin's recycling program to teach his students English. Photo: Alex Lin

"To date, we have sent out over 60 computers in seven media centers to countries such as Cameroon, Kenya, Mexico, Sri Lanka, and the Philippines," says Lin.

Lin hopes that these media centers will become a model for the sustainable and responsible reuse of computers between nations.

He also wants to "raise awareness of e-waste in developing countries so that they will be able to create the infrastructure to handle e-waste before it becomes a problem."

According to a report issued by the United Nations Environment Programme last month, the amount of e-waste in developing nations is expected to greatly increase. By 2020, the report says, e-waste from old computers in South Africa and China will have jumped 200 percent to 400 percent from 2007 levels, and by 500 percent in India.

For all of his success, Lin's most far-reaching legacy might prove to be the one closest to home. Like his father did for the original team, Lin has begun mentoring his 11-year-old sister Cassandra's Junior WIN Team: shepherding their efforts to recycle used cooking oil into biodiesel that will help heat homeless shelters.

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