



Helping Seniors Communicate



Matías Osuna, 17, knows that talking is an important part of our lives. "Our personality is what we say and how we say it," he says. "Communication is what makes us 'us.'"

He thought about communication when his school's FIRST Lego League team was entering an inventing contest. The challenge was to solve a problem seniors face as they age, or get older. Seniors is the term for people age 60 and up.

That was 2012. Matías was 11 and new to the team. He was eager to learn from the other students. And he was excited to invent something helpful!

Think It » FIND A PROBLEM

Matías's team of 7 kids set out to learn about aging. They visited a senior care home near their school. They learned that a common problem is "dementia." People with dementia can have trouble remembering things. They can forget how to do simple tasks. They might even have trouble putting words together in a sentence. That makes it hard for them to say what they need. And it makes it hard for caregivers to help them.

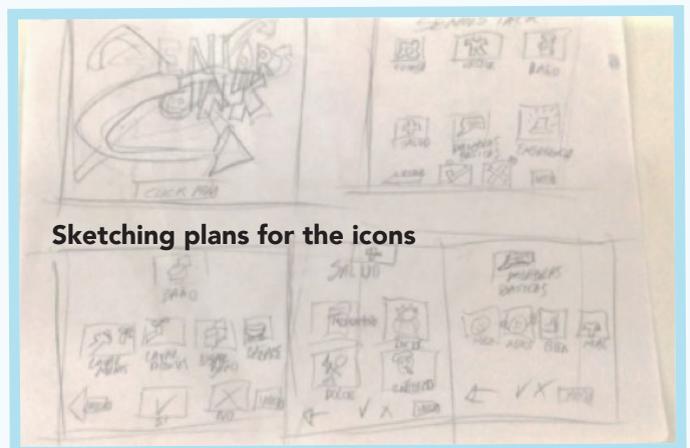
In Colombia, where Matías lives, and around the world, dementia is a serious problem that affects a lot of people. Matías' team wanted to invent something to help people with dementia and their caregivers.

Explore It » STUDY THE OPTIONS

Matías and his team knew some computer programming. They wondered if they could make a communication app. They learned about an emergency communication system that asks people questions. In that app, the people select an answer from a set of options. The team liked this model. The team also learned that many people in Colombia have tablets. Tablets are easy for seniors to hold and tap. An app for a tablet could be a good solution!

Sketch It » DRAW A PICTURE

The team imagined an app with simple icons. The icons would stand for basic needs. They sketched the icons and the screens the seniors would see. They drew icons for food, bathroom, dressing, and health needs. There was also an emergency "panic button" and an icon for basic words, such as "Hello" and "Goodbye."



Create It » PUT IT TOGETHER

The team used a program called “Flash” to create the app. They called it “Seniors Talk.” They designed a main menu for the basic needs. There were “sub-menus” for the options. For example, the options under “Food” were “drink,” “snack,” “main meal,” and “dessert.” Those words, of course, were in Spanish for people living in Colombia.



Try It » TEST IT OUT

The team went back to the senior care home. They asked the nurses and residents to test the app and give feedback. Some people said the buttons were too small. Others couldn't hear it well. Some said they couldn't communicate their needs. The students were grateful for the feedback. This ended “Phase 1” of the app project.

Tweak It » MAKE IT BETTER

After Phase 1, most team members felt they were done. But not Matías! Tweaking is his favorite step in the inventing process. He says that he likes to see an invention “fulfill its task.”

So, Matías made the icons bigger. He added options to give seniors more choice. And he changed the basic words to basic questions. The seniors told him this was important. They wanted to ask “Who?, Why?” and other questions. He also added a “yes” and “no” button for answering questions. And lastly, he added the option of English or Spanish. Matías is fluent in both languages!

Sell It » MAKE IT AVAILABLE

The tweaks that Matías made took him two more years. In 2015, he entered Seniors Talk in the Spark!Lab Invent It Challenge and won! Now he's in college and busy studying Mechatronics. That's a blend of mechanical engineering and electronics. He also works with a new team inventing devices to help people with disabilities.

But he thinks the Seniors Talk app is a good product. And because he believes communication is so important, he may patent it some day. Who knows? Maybe Matías and Seniors Talk will help make life better for millions of people in the future.

Matías is still inventing. His advice? “Find a problem you want to solve and just try things out! You don't even have to make it, but ask for feedback.”