

## Jim Correll – Fab Lab

This is Kansas Profile. I'm Ron Wilson, director of the Huck Boyd National Institute for Rural Development at Kansas State University.

Does your school have a lab? Maybe a laboratory for chemistry or biology? Today we'll meet a school laboratory of a different sort. It is what's called a Fab Lab. This Fab Lab is helping entrepreneurs develop new products. It even helped one little girl get a brand new right hand. This is today's Kansas Profile.

Last week we learned about Jim Correll, facilitator of the Successful Entrepreneur Program at Independence Community College in Independence, Kansas. Among other things, the entrepreneurship program has pioneered a new type of facility called a Fab Lab which is short for Fabrication Laboratory.

"The Fab Lab movement started at MIT back in 2000," Jim Correll said. "A professor there found that he had lots of students who were smart but who couldn't make anything. He started a Fabrication Lab where students could build things." The lab made state-of-the-art technology for advanced manufacturing and digital fabrication tools available to those students.

The idea worked so well that the concept spread overseas and across the U.S. An International Fab Lab Network was created. One of the rules of the network is that the Fab Labs must be available to the public.

Jim Correll became interested in the idea. After lots of research and fundraising, Independence Community College opened its Fab Lab ICC in fall 2014. It is the first community college Fab Lab in Kansas that is available to the community. The Fab Lab is located in a building which had formerly been utilized for training by Cessna.

One example of the high-tech equipment in the Fab Lab is a 3-D printer. These computer-controlled printers essentially squirt layers upon layers of liquid plastic into designs that create physical objects. Such technology can revolutionize manufacturing by creating custom designs on demand.

In July 2014, Jim Correll met a man who was talking about a little girl in rural Kansas who had been born with a congenital abnormality: She only had tiny stubs of fingers on her right hand. Her community was having fundraisers to try to raise the funds to buy a 3-D printer to make a hand, as they had seen on the Internet.

Since Jim was in the process of acquiring a 3-D printer for the ICC Fab Lab, he told the man, "If you can get the plans, you can use our 3-D printer to produce it."

The man eventually found plans for the artificial hand through a website called [www.enablingthefuture.org](http://www.enablingthefuture.org). The design was called a Cyborg beast hand. With help from two Engineering Technology students at Independence Community College, the 3-D printer in the Fab Lab printed out the parts and they were assembled into a new hand for this little girl.

On September 27, 2014, she received her new artificial hand. Instead of purchasing a \$40,000 prosthesis, this artificial hand was produced with a \$3,000 machine and only \$50 worth of materials. Wow.

This little girl and her family are very excited about her new hand. She lives near the rural community of Toronto, Kansas, population 307 people. Now, that's rural.

“We would love to find three or four other families who would benefit from building an artificial hand like this,” Jim said. “Come for a weekend and go home with a new hand.”

The Fab Lab has many possible applications for students and the community. “We are open to the public, located anywhere, through an annual membership system,” Jim said. The Fab Lab is typically available for ICC classes in the morning and then open for public use in the afternoons and on Saturday.

The Fab Lab is not a contract job shop. “We want people to make their own designs,” Jim said. “We don’t want to compete with manufacturers, we’re about helping other people.”

Does your school have a laboratory? Yes, but does it have a Fab Lab? We commend Jim Correll of Independence Community College for making a difference by making this technology available to students and the public. As one ICC student said after working on the hand for this little girl, “We can actually change lives with what we’re doing.” I think this lab is Fabulous.

For the Huck Boyd National Institute for Rural Development, this is Ron Wilson with Kansas Profile.