

VRTEX® Virtual Reality Welding Simulator Training System Helps Make Welding a Reality at Boys Town®



The Boys Town® Vocational Career Center houses the new Welding School program re-opened in 2017.

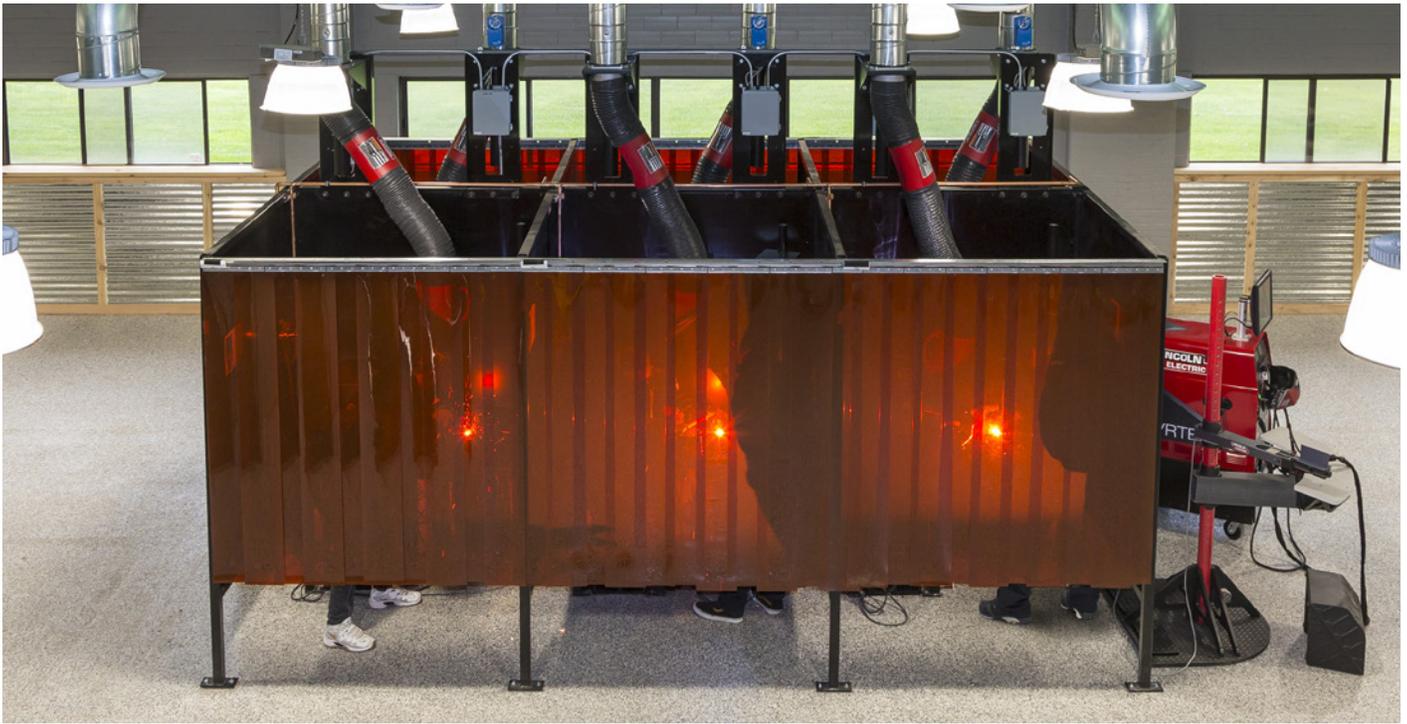
For a century, Boys Town® has provided support and education to at-risk youth, giving them the tools they need to succeed as adults.

While the boys (and girls since 1979) come to Boys Town with a variety of personal or family issues, the organization is driven by the credo of its founder, Father Edward Flanagan: There is no such thing as a bad child. Help is provided through numerous ways, including education. Boys Town High School is an accredited educational institution that graduates hundreds of students each year.

When Father Flanagan founded Boys Town in Omaha, Neb., in 1917, he insisted that every child learn a trade. Of course, times change, as do philosophies. Three decades ago, Boys Town began to significantly transition away from vocational education and toward college preparatory classes, reflecting a national trend. One by one, the trades programs disappeared.

Father Edward Flanagan, who founded Boys Town in 1917, arranged to have every child learn a trade to increase their chances of steady employment.





The new Boys Town welding school opened with an introductory class for a small number of students and is scheduled to expand soon with an added advanced class.

But for every action, there is a reaction. As vocational education faded, a not-so-curious consequence occurred: The number of expert tradespeople began to decrease, leading to a shortage in many of the trades, including welding.

During the past decade, a renewed emphasis on teaching the trades has occurred. Nowhere is that more prominent or welcome than at Boys Town. “I believe Boys Town is ahead of the curve in bringing the trades back,” says Jim Clements, a trades instructor at Boys Town High School. “Because we individualize each student and observe them carefully, we are more in tune to say which of our children would do better with the trades.”

In January 2017, Boys Town introduced an introductory welding course to its curriculum. It’s the latest trade program to be offered, joining certified nursing assistant, small engines, construction and carpentry.



Jim Clements, Boys Town welding instructor, played an instrumental role in setting up the school and selecting the initial slate of welding students.

The first welding class included seven students. It could have been dozens more, but Clements says Boys Town wanted to keep the class limited to students who believed they could make a career out of welding. At least five of the seven have a strong interest in becoming a welder in the future, he adds.

“This is a trades-readiness program for kids that want to learn a trade that might be a career one day,” Clements asserts. “So, we focus on kids that are good at working with their hands and figuring things out in their heads. We take kids where it is a real possibility that they will become tradesmen and try to get those kids into the class.”

As they began to lay out a program, administrators were able to reach into Boys Town’s past. A large space that once housed welding classes was identified and secured for the new program. The space, with its high ceilings and good lighting, is ideal for the required ventilation and modern equipment.

Next, administrators called on a number of external sources, including other high schools and a local union, to gauge the best method of training. The consensus was that virtual training, followed by real welding, was the best curriculum route to go.



Jeff Peterson, executive director of the Home Campus, consulted with other high schools and local unions for advice on setting up the new school.



Bob Reznick, Superintendent of Schools, states, “. . . the students go in and immediately engage in some learning activity. That is inspiring to watch.”



Jim Clements states, “The VRTEX® allows me to go much more quickly with students and get much more done.”

“We were not aware of virtual training,” says Jeff Peterson, executive director, Home Campus, for Boys Town. “We were considering standalone welding units, but our risk managers were concerned. A local union told us virtual was the way it trains its welders. It’s safer and accomplishes as much, if not more.”

Boys Town made the decision to incorporate two Lincoln Electric VRTEX® Virtual Welding Simulator Training Systems into its program, the Mobile and 360. Along with Lincoln Electric welding booths, fume extraction system, Tomahawk® plasma cutter and POWER MIG® 210 MP, students are developing their skills on the world’s finest equipment in a safe and effective environment.

The VRTEX offers realistic welding visual and audio feedback to allow students to practice their welding technique in a simulated environment. Stick, MIG and flux-cored welding processes can be simulated, and the program’s software grades students on their technique, allowing them to see their mistakes and how to improve.

There is less risk to students, especially beginners, because they practice in a virtual environment to get comfortable before welding in the real world. For organizations, VRTEX makes it cost effective to have beginning students practice each weld many more times while greatly reducing the cost of material, welding rod or shielding gas to the program.

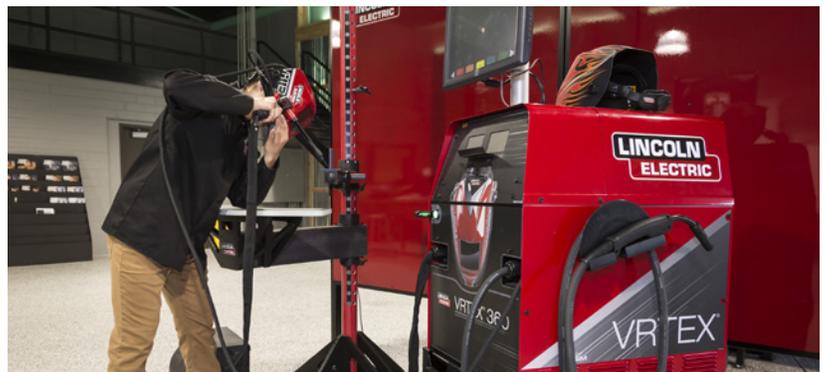
Jim Clements stated, “The VRTEX allows me to go much more quickly with students and get much more done.

“The setup is really quick. We don’t have to get a new piece of steel and clean it, polish it, grind it. We can spend \$20,000 of ‘virtual’ steel without using a piece of real metal, and they can keep going over and over until they get it right.

“It also gives me the opportunity to get a student set up on a process, and I don’t have to worry about leaving them unattended for a few seconds to go look at the other students’ work,” Clements added.

“If we’re going to weld something that we have not welded,” said student Cameron Martin, “we’ll do it on the virtual welder first, then we’ll go actually weld it.”

Immediately, the benefits of the VRTEX came into play for Boys Town. When the welding program began, the space wasn’t finished. The VRTEX made it possible to students to start learning. For the first half of the first semester, students learned to weld only on the VRTEX. According to Clements, students were more proficient at welding after one month on VRTEX training than they would have been actually welding for two months.



Instructor Jim Clements commented on the program’s use of the VRTEX, “We can spend \$20,000 of ‘virtual’ steel without using a piece of real metal and they can keep going over and over until they get it right.”



The school's first class was carefully selected among many applicants for their strong interest in a welding career.

"It allowed the students to work on building the muscle memory they need for the different processes," Clements points out. "When they got into the welding booth to actually weld, they were set up for success."

For a generation that is infused with a gaming mentality, the VRTEX is an ideal way to learn. "It's very appealing to young people," Peterson stresses.

Clements adds, "The kids get very competitive with VRTEX; they see it as a video game."

To a greater degree, the ability to hone their skills appeals to the Boys Town students who see welding as a viable career. "Using the VRTEX enhanced my skills greatly," Martin says. "When I messed up, I know what happened and can redo the weld. It instilled confidence."

The future appears to be bright for Martin and his fellow weld school students. They will have several options once their education at Boys Town is complete. They can attend a local community college and get a certificate or two-year degree in welding. Or they can join a union and enter the workforce in an apprenticeship. Local Omaha businesses in need of welders have expressed an interest in the Boys Town program.

The future is also bright for the welding program at Boys Town, which will add an advanced welding course in the 2017-18 academic year taught by a certified instructor.

"The thing about the trades that we love more than anything is the excitement in the students," says Bob Reznicek, Superintendent of Schools, Boys Town Schools. "All we have to do is open up a trades

room, the students go in and immediately engage in some learning activity. That is inspiring to watch."

The trades programs in general, and welding program in particular, dovetail perfectly into Boys Town's mission to turn at-risk youth into productive adults who contribute to society.

"There is goodness in all of these kids," Peterson says. "We have to find and polish that goodness. We have a responsibility to turn these kids into something better and make them more productive."

And as the trades undergo a renaissance throughout the country, Boys Town will be at the forefront of educating future generations of welders and other skilled tradespeople.

"Everyone is on the same page about bringing back the trades," Peterson says. "We need people to take care of things that many of us don't know how to take care of. It's a talent pool that is desperately needed."



Commenting on the Boys Town mission to turn at-risk youth into positive adults that contribute to society, Jeff Peterson says, "We have a responsibility to turn these kids into something better and make them more productive."