COVID-19: Trades schools are thriving in the new normal

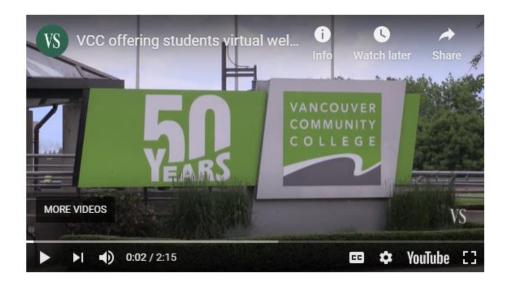
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Vancouver Community College was forced to quickly came up with options for its trade programs when the campus shut down in March, said Brett Griffiths, the dean of trades, technology, and design. JASON PAYNE / PNG

Teaching the trades has always been about learning by doing. Whether it's welding, mechanics, electrical, carpentry or even hair cutting, much of the instruction is hands-on and this makes COVID-19 a unique challenge for educators in the trades.

Vancouver Community College was forced to quickly came up with options for its trade programs when the campus shut down in March, said Brett Griffiths, the dean of trades, technology, and design.



They shipped off mannequins to hairstyling students isolating at home, and estheticians-in-training practised on family members and filmed the process. Mechanics programs turned to Zoom, and with Go Pro cameras students and instructors did deep dives into engines.

Now the welding and automotive painting programs at VCC are enhancing their at home learning options with virtual reality, and the technology is so promising they will likely continue to use it when COVID-19 restrictions ease.

"We are rolling out a new virtual reality program for welding and automotive painting, and it's the first of its kind in Canada," said Griffiths.

Virtual reality has advantages for welding: there are no sparks or fumes and no danger for learners, and studies show that training with welding simulators increases proficiency, said Griffiths.

The college already had a virtual reality booth on site for welding but the technology wasn't transportable. Now it is.

VCC worked with a software engineering company in India to design the VR welding and painting practice program, and bought the computers and virtual reality headsets that will allow students to practice at home.

"Through gameification students can use the VR and the hand controller to practice distance speed and angle. It helps to train them up before they get into the shop and can help bring that experiential piece," said Griffiths.

Of course, eventually students will have to spray a real panel on a car, and glove up and weld a real door. Griffiths said the college will soon be hosting smaller cohorts for on-site portions of their programs, and is adapting their shops to meet WorkSafeBC guidelines so everyone feels comfortable and stays safe.



Carpentry student Mitch Marentette works on a project at BCIT. FRANCIS GEORGIAN/PNG

The joinery, carpentry and electrical programs at BCIT have already started welcoming small student groups back into adapted spaces, and the school has developed enhanced health and safety protocols, said Wayne Hand, the dean of its school of construction.

When students in the carpentry and joinery program recently returned to the Burnaby campus to complete a week of hands-on training they came in shifts in smaller groups, and worked with individually assigned tool sets at socially distanced individual workstations separated by plywood dividers. Several easily accessible hand washing stations and an on site cleaner sanitizing throughout the day are part of the deal.

"It's taken us a number of months to rethink the projects, scale down the projects and identify what are essential, what do you really have to do on a physical hands on basis. We've taken the guidelines of how to do it safely and reworked the spaces to makes sure we ensure social distancing, and now every student gets their own set of tools, they are assigned a cubicle, and their own supplies and materials," said Hand.

Some trade programs such as electrical and joinery and sheet metal will fully meet their student schedules, other trades like piping present greater challenges, said Hand, but he's confident the college will be able to deliver.

"There is a lot of positive feedback and certain aspects will add value in the long run. Videos give students the ability to review the course work easily. The other part is the safety aspect when we do bring them back, and I'm really impressed by safety and security protocols we've developed. This is the new normal," said Hand.

At VCC, one unexpected side-effect of the pandemic has been an uptick in applications from domestic students, said Griffiths.

"We seem to have seen an increase in domestic student enrolment, and it may have more to do with the current labour market. If you can't go work in a restaurant, it's a good time to get a trade."

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