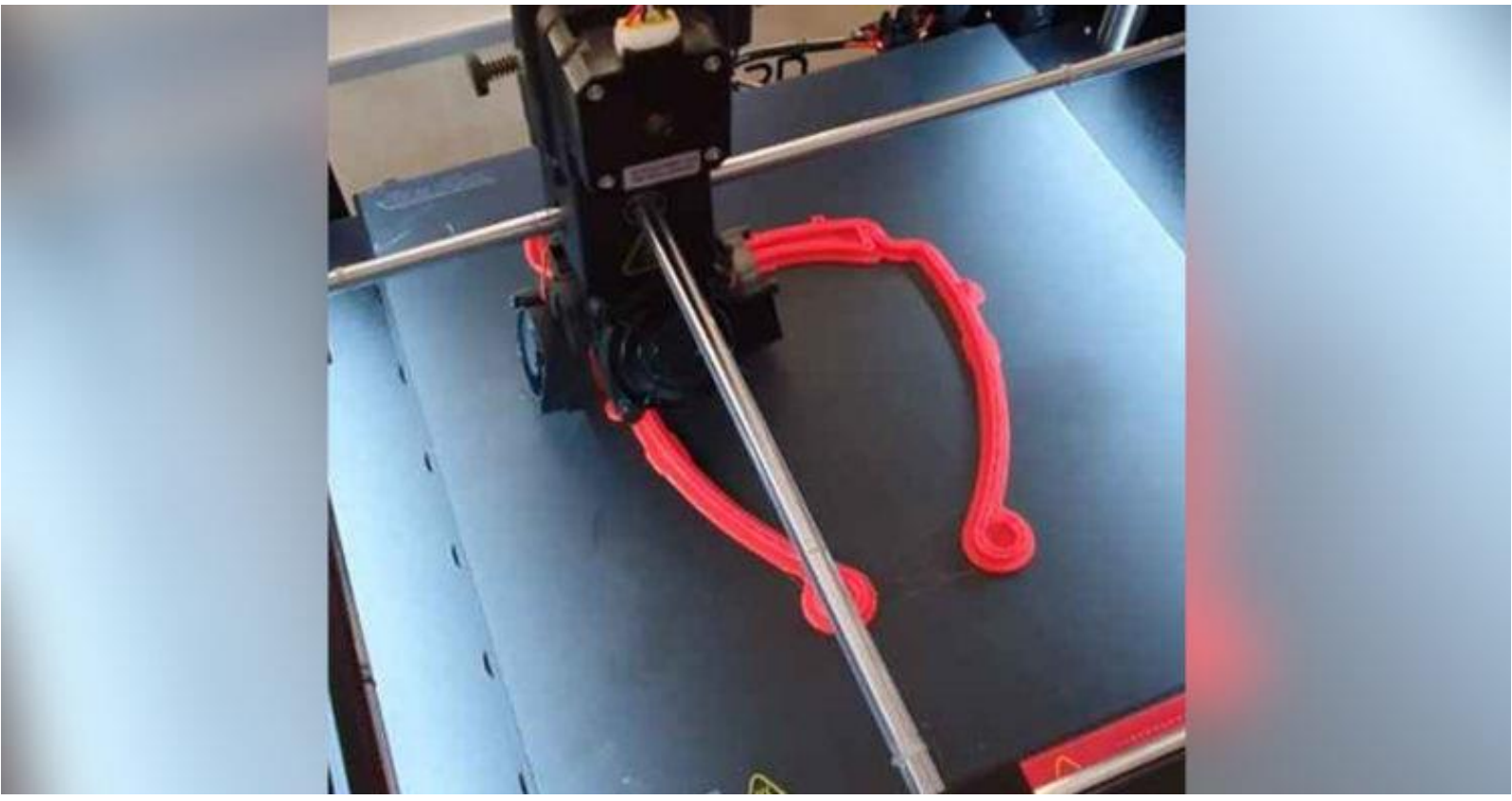
How the Pro2 Plus Large Format 3D Printer Benefits Education



Raise3D Case Study
Nov 13, 2020

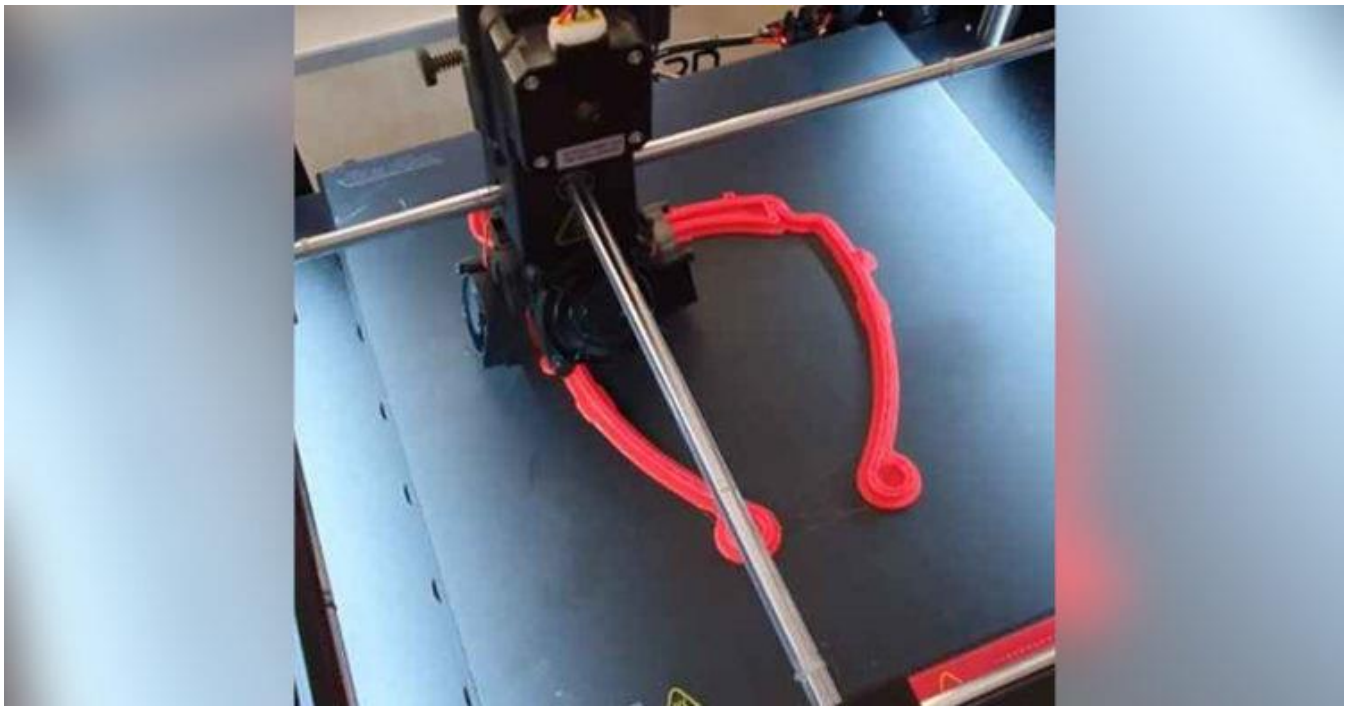
Brisbane Boys College aims to inspire students with how engineering contributes to the world by helping their students understand manufacturing. The school's lab provides an array of technology to inspire and assist students in manufacturing solutions. They receive training on technologies including sewing machines, laser cutters, and the school's four Pro2 Plus large format 3D printers from Raise3D.

How 3D Printing Benefits Education

A core belief of Brisbane Boy College is that learning outside the classroom has a profound impact on a student's development. 3D printers can automatically create parts built of any geometry without the complicated process of molding or CNC milling. Therefore, 3D printing allows the school to easily provide plenty of opportunities for its students to learn real-world manufacturing applications.

How the Pro2 Plus Benefits Education

The Pro2 Plus is also a large format 3D printer, meaning it can produce large 3D printed parts. It has a build volume of 12 X 12 X 23.8 inches (305 X 305 X 605 mm). However, unlike common factory facilities, the Pro2 Plus is a user-friendly enclosed 3D printer, making it a safe workstation, which is particularly important for schools. This 3D printer allows the students at Brisbane Boy's College to create components fitting manufacturing processes. In their second year, students start by sewing their aprons, then design and 3D print the buckle that clasps the apron. By using the Pro2 Plus 3D printer, students get hands-on experience of the manufacturing path from design to construction.



"Over a 2 to 3 week period we made about 150-200 headframes that hold face shields. We modified the frame to help it print quicker so we could get a better and quicker print."
-- Rory Whitelaw, Technology Department

Creating 3D Printed PPE Using a Large Format 3D Printer

Hands-on experience is important for learning the 3D printing process. Therefore, when Herston

Biofabrication Institute needed assistance in providing personal protective equipment (PPE) to frontline healthcare workers, Brisbane Boy's College volunteered to assist them. The school provided high volumes of 3D printed PPE using their four Pro2 Plus large-format 3D printers.

The Pro2 Plus is a user-friendly industrial 3D printer with easily switchable nozzles. The school was able to quickly switch to a .8mm nozzle on the Pro2 Plus to produce the 3D printed PPE. PPE is generally made up of simple shapes, which reduces the printing time by half for each object without a loss of surface quality.

ideaMaker 3D Slicing Software Helps Teach Engineering

Brisbane Boy's College also utilizes ideaMaker, a 3D slicing software from Raise3D. ideaMaker gives students the opportunity to apply engineering thinking in the manufacturing process by prototyping solutions to practical and community problems. For example, students make load testing rigs to investigate how model orientation and infill ratios can change part strength.

In seeing a 3D printer's value in practical education, Brisbane Boys College has decided to expand the use of the technology through other learning areas in a new syllabus. The new syllabus has a focus on incorporating 3D printing technology in engineering. For example, the college is now developing a program to allow students to design, print, and fly their own personally-designed drones.

Connect with Raise3D

Do you have a great 3D printing success story and think it would be cool to be featured on www.raise3d.com, we would love to learn more! Write to us at inquiry@raise3d.com

For more information about Raise3D printers and services, browse our website, or schedule a demo with one of our 3D printing experts.