

YSOFT **BE3D™** **IN EDUCATION** **CASE** **STUDY**

SCHOOL ADOPTS 3D PRINTING TO PREPARE STUDENTS FOR FUTURE CAREERS



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Gand is one of Rogaland's largest secondary schools and was established in 1897. About eleven hundred students attend, with ages ranging from fifteen to twenty years old. As a vocational school, Gand believes in personal growth, creating an environment that helps students develop their own abilities and self-confidence. Students are offered a variety of courses including building and construction, electronics, automation and data, health and youth development, service and transport, technology and industrial production – as well as classes that prepare them for higher education or vocational careers.

CHALLENGE

Gand's interest in 3D printing started with the teachers, mainly those who teach electronics, construction and industrial production. The school is always looking for ways to creatively prepare their students for future careers. Incorporating 3D printing into the current teaching methods is one area Gand wanted to expand.

Gand was curious about 3D printing and started with a "do-it-yourself" kit in the electronics department. It wanted to create a makerspace area for students as well as create 3D models the teachers could use as teaching aids. The school recognized

With YSoft be3D eDee, we feel we are better preparing our students for their future careers and nurturing their creativity.

– **Ingve Bjørnå**
Electronics Teacher, Gand
Videregående Skole

how 3D models, compared to traditional 2D methods, help students' to better understand a subject and retain information.

One area that Gand was concerned about was safety and wanted to have a level of security over the 3D printer and the models being printed.

SOLUTION

Gand chose YSoft be3D eDee because the teachers liked that the printer was locked down during printing. Gand wanted teachers to work with students to create and prepare models and then the teachers to log in and print them.

The lockable doors of the YSoft be3D eDee printer provide the security they were looking for, and the management software allows the teachers to control access without having to lock the printer away.

Gand's YSoft be3D eDee initial solution comprised of:

- 2 YSoft be3D eDee 3D printers
- DeeControl layering software
- Y Soft Certified Filament
- YSoft SafeQ 3D Print Management software

RESULT

Gand started with 2 eDee printers, located in the library and there has been a high level of interest in using the 3D printers from both students and teachers. About 50% of printed models are from teachers and 50% are student projects.

Teachers are creating 3D models as teaching aids and in classes, students have made 3D models. Take for example electronics lessons, where the class makes car parts. Also, twice a year, Gand gets the students to create audio speakers and speaker bases, a project inspired by something the teachers found on the Internet.

Students are also able to learn about vector files and raster files by printing 3D models of Marvel comic logos. This helps to illustrate the difference between the two types of files. It has also increased students' interest in 3D drawing and learning how to create 3D models on the computer.

And due to the location of the printers, students are using the library's resources more, an additional benefit that they had not predicted.

The 3D printing benefits experienced by Gand include:

- User friendly design & management software
- Safe & secure access
- The perfect balance of accessibility & access control
- Encouraging learning through engagement & creative thinking
- Increased use of school's library resources

With YSoft be3D eDee, Gand feels they are better preparing students for their future careers as well as nurturing students' creativity. After starting with two 3D printers, the school now has four, all situated in the school library.

We decided to use the YSoft be3D eDee solution because we liked that the printer was locked down during printing. The locking doors gave us the security we were looking for. We liked the overall concept that eDee allowed us teachers to control access.

– Sverre Wilhelmsen
IT Manager, Gand Videregående Skole