

1 Adaption of our education to the Corona pandemic

Right after the first lockdown was announced on Thursday, March 12, 2020, the management of our Faculty EEMCS came together on Friday, discussing the situation. The Programme Director of CreaTe recorded a message the same day, and distributed it amongst the community through our Instagram-page (@utwentecreate). We immediately formed a *crisisteam*, consisting of the programme director, programme coordinator of Creative Technology as well as the programme coordinator of Interaction Technology, study advisor, and a student who already had a position with us as assistant-module coordinator. This *crisisteam* came together every day in the first couple of weeks and later according to the needs of the moment. The UT decided to give all the programmes one week to prepare to go online.

Crisisteam

2 Online education

At CreaTe, all education was transformed into *online education*. This was done in close collaboration with the module coordinators and their team of lecturers. As crisis team we had meetings with them, to share our knowledge and support them. There were two lecture weeks left. All the lectures were given online via Canvas (Big Blue Button conference tool). Most of the assessment remained to be done. Students were disappointed with the situation, nevertheless, they appreciated that the programme worked towards continuing the education to prevent a study delay without compromising the quality.

Online education

As soon as we got notice that all education in Q4 also had to be *completely online*, we started with transforming it to online education. It required creativity how to do the projects online, but we managed well. It is obvious that the students would have loved to do at least the projects on campus. The real challenge were the lab sessions. Our Smart Technology lecturers in M3 (Intro to physical systems) and M8 (Biosignals and medical electronics) transformed their lab sessions into home lab using the Arduino platform and other equipment that was sent to the students.

Completely online

Extra attention was paid to the situation of our *graduation students*. Normally, they work with user groups who were now extra heavily affected by the Corona-crisis (medical personnel, older people). Therefore, these graduation students therefor had to follow extra strict protocols and had to show that they were operating corona-proof in their ethical approval form. Also, they often make physical installations while using equipment from our SmartXP lab. Our graduation project coordinator came up with a smart protocol for *Corona-proof lending of materials*, approved by the ARBO-advisor. We had extra meetings with these students to find out their concerns, and see what we could do to help them. It is obvious that the students have appreciated this. Their intermediate and *final presentations were held online*. On top of all other measures, we allowed them extra time during the summer for finishing their graduation projects and graduation thesis.

Graduation students

Corona-proof lending of materials

Final presentations online

In September 2020, the situation had slightly changed. The university permitted us to have about *40% of our education on campus*, to be used for tutorials, labs and projects if they could not easily be done online. In August the *crisisteam*, together with the module coordinators, discussed what really needed to be on campus and what could also be done online. We decided that most of the assessment will be on campus.

40% of education on campus

Since September 2020 we have re-discussed several times what needed to be on campus, and what could be done online, since we were working from the premise "*online if we can, on campus if we must*". It has not systematically changed our point of view on this. The current situation is that lecturers must ask permission from the programme director to have education or assessment on campus.

"Online if we can, on campus if we must"

The University of Twente took some extra measures as to contribute to the *well-being of students*. The BSA became a postponed BSA and there became a soft-cut for transferring to the Master of choice at the UT.

Well-being of students

Our observation is that what makes education in Corona-times especially difficult is that students who are falling behind do not easily come forward with their questions. The peer-to-peer learning aspect (just sitting next to each other and easily asking questions) has been minimised. We countered it as much as we could by offering extra study nights, but also by putting the teaching assistants in a different role: not just there to assist with questions from students, but also the first “*ears and eyes*” in the project groups, and reporting back about this to the module team.

Transforming our education into online education has put an enormous strain on all of us. Lecturers had to prepare online lectures while still becoming acquainted with the technical systems. The study adviser got an enormous number of extra questions from concerned students. We also had to prepare alternative assessments where applicable and submit our changes to the examination board.

3 Examination

The programme has decided to use, if possible, *alternative assessment methods* to prevent fraud from happening with students taking tests online. Written tests were replaced by individual (take home) assignments and physical installations into virtual (VR) installations. These assignments had to test the same ILOs as the written tests. To prevent fraude multiple-choice tests were modified into speeded-tests with randomised questions and randomised answering choices. After the test was conducted the lecturer involved was asked analyse of the results and compare the scores to previous years. Randomly, students were chosen for an oral follow-up. Students had known this upfront. If there was a real suspicion of fraud, the assessment would have been declared invalid. The good news is that until now we have not been in the position up until now to declare an exam invalid.

All alternative assessments were submitted to the examination board by the programme management and had to be approved.

Since September 2020 the programme, in line with all other bachelor programs in the Faculty EEMCS, has decided to offer an extra resit, the so-called ‘*Corona-resit*’ for examinations that are organised on campus. Although initially meant for those students who missed another opportunity for taking the exam since they had to be in quarantine or showed symptoms, we have decided to keep things practical and open the Corona-resit for all students.

We have decided as a programme that if the first chance for an examination was on campus, then the resits should be on campus as well. We are not deviating from this rule.

4 Monitoring

After every module we have organised *discussions with the module coordinator* and discussed the quality of education and the effect on the learning outcomes. It is clear to us that students have more trouble keeping up with the pace for a wide variety of reasons and, therefore, skip module units. We don’t see signs of them not reaching the same learning outcomes but they have troubles with following online classes and being socially isolated from their peers. We discussed the situation with the OLC during every meeting, we spoke with the study association (educacie) every 2 weeks. The normal module-evaluations (SEQ) have been extended with questions about the online education.

5 Student well-being

It is obvious from all sorts of publications that students suffer from the Corona-crisis. Not being able to have a normal student-life, to make new friends and meet up with them, to study together is taking its toll. We see a decrease of motivation of some students. Suffering from Corona themselves or having to be in quarantine, sometimes more than once, being worried about friends and family, makes it worse.

What we do as a program or as university to enhance the well being of our students

- We communicate clearly, at the [🔗 central level](#), about the current status of the Corona-measures.
- We communicate as a program about the current measures applicable to the program.
- The BSA was postponed in the year 2019-2020, and has been eased to 40 EC in the current academic year.
- We organise extra 'Corona-resits'.
- We organise extra study nights.
- We hire many more TAs as support for teachers and to have more contact with project groups.
- We visit the modules and ask the students how things are going.
- We organise bi-weekly Q&A sessions for students doing their Graduation Project.
- We developed a lending protocol for technology from the SmartXP.
- The study adviser is extra active in promoting that she is there to support students with their concerns.
- We have extra meetings with the study-association to discuss what they see happening and think together about what we can do.

6 Concluding remarks

Community-feeling

Let us conclude with some hopeful comments. It is not all misery that is happening to us as a programme. Our *community-feeling* is stronger than ever before, as shown e.g. by the Instagram posting of the teachers and the response by the students at Christmas time: it is heart-warming. Our teachers of M3 came up with notions about what they think is essential in education, notions that they want to keep after we go back to 'normal'. Their experiences were the basis for an [🔗 article in Trouw](#).

We all love to go back to a life on campus

But don't be confused: *we all love to go back to a life on campus*. Be in our SmartXP lab. Hang out at the Protopolis, the home of the study association. Have many more occasional meet-ups in the hallway. Do the projects on campus. And do everything else that makes us happy and glues us together as human beings, and in this case as CreaTe-community.