

Course assessment SD2411, 2020

Course round description and overview

The course round 2020 was the most extreme ever due to the C-19 pandemic. With short notice we decided to pre-record the lectures and had to come up with suitable and practical ways to do that, given the very tight time constraints. It both included practical aspects like hardware and software for recordings, editing, storage and management of video material, how to practically deliver the course content (lectures, props for demonstrations and computer exercises), how to examine and essentially run a course for almost 80 students totally remotely. There were also many pedagogical aspects that had to be considered, since the change of format both brought challenges and opportunities to do things differently.

Some weeks into the course we felt uncomfortable that we had so little feedback from the students on how things worked out. We provided links to the pre-recorded lectures on Canvas and did live Zoom sessions on the scheduled lecture hours but relatively few students showed up at the live sessions and they generally preferred to have their cameras turned off and didn't say much spontaneously. From the teachers' perspective it was like broadcasting television, with very little contact and feedback from the audience. We then asked all students to show up for one of the scheduled Zoom sessions just to survey how they were doing. The message sent reflects the situation at the time:

"Since I have some information and questions, I would like all of you to attend class today. It is not anything dramatic but I'd like to reach everyone for half an hour or so. Basically, I'm sick and tired of not meeting you in person and would like to do something about it for a change. And don't worry, I won't force you to attend every future class if you don't want to. :-)

See you at 13:15"

At the meeting we learned that the students were surprisingly happy with the situation and how the course progressed. They liked the pre-recorded material and other supplementary material we provided. They were in essence reporting back that "We're fine and doing relatively well. The material you have provided and the lectures you give are good and helpful, and keep us busy with learning the stuff you present to us." That was of course very comforting news which made us confident that what we were doing was not totally crazy but rather seemed to be quite appreciated by the course participants.

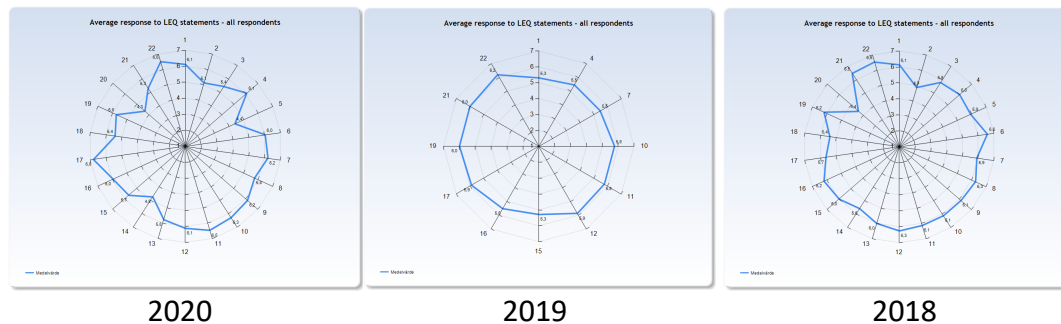
Later we also had to manage oral examination of computer lab exercises and a final written exam, all remotely, and everything related to that also came out relatively well in the end.

There were obviously serious concerns about potential problems for the students, doing the course work entirely remotely and e.g. lack possibilities to meet with other students, discuss the course content and study together. There was also a concern that the all-remote format might fit some students poorly, just as it might suit some other very well.

In the testimonies from students it is clear that many appreciate pre-recorded lectures and some of them even prefer that before live ones. Some other students however have a totally opposite opinion so there is no clear consensus on the matter.

Outcome from LEQ

The LEQ looked slightly different than the one from the previous year but the 2019 response was unusually “streamlined” with all responses in the interval 5.3-6.2 on a 0-7 scale. Some comparison was also made with the year 2018 to easier spot significant differences.



As seen in the plots above, parts of the pattern is common for 2018 and 2020 (and it is hard to extract anything significant at all for 2019). Focussing now on the two first the most significant differences occur for statements 5, 14, 17 and 21 in the LEQ, where 5, 14 and 21 come out lower than usual for 2020 while 17 comes out stronger. Looking at these specific statements in greater detail now:

Statement 5 reads “I felt togetherness with others on the course”, so the dip there is quite expected and does not call for any deeper analysis.

Statement 14 reads “I received regular feedback that helped me to see my progress”. The dip here could likely also be attributed to the special circumstances and the generally increased anonymity of the course participants. It might reflect a lower level of formative feedback from the course instructors but also a lack of contact between the students. It is believed that both of these aspect have affected the outcome.

Statement 17 reads “My background knowledge was sufficient to follow the course”. The apparent increase on this particular point might be coincidental but if not, it should be interpreted as a positive outcome. That the students feel that they were better prepared could maybe indicate that the course succeeded better than usual in providing supplementary material and link the course content to previous knowledge.

Statement 21 reads “I was able to learn by collaborating and discussing with others”, and again, it is not surprising to see a significant dip there.

Somewhat surprisingly the female share of the respondents in the LEQ did not report lower agreement with statements 14 and 21 compared to previous years. They did however report lower agreement with statements (2 and 3) related to their “Exploration and own experience”, for which the female students 2018 reported a higher agreement than the male students did. (The response frequency was however only 15% in 2018, compared to 35% 2020, so one should maybe be careful to avoid statistically uncertain conclusions.)

There was also a survey conducted by the students in the Aerospace master programme. The outcome was pretty diverse and was also directed to two different courses

simultaneously. It was therefore hard to distinguish exactly what was referred to what, and to what extent the students testified about their general study situation. (There were clear indications of a general dissatisfaction with the situation, just as one could expect for any category of people, teachers included.)

Finally looking at the free text feedback provided in the LEQ:

The course participants are usually quite satisfied with the course. That is on the whole, while of course there are always some students who have concerns or complaints on different aspects of it. This year however, the students (on average) appeared to be more satisfied than ever, and many of them gave very encouraging testimonies from their course experiences.

Interpretation, conclusions and actions

Apart for the LEQ we have very little additional data to judge from. One is however how the students did in exercises and the exam and, interestingly, virtually no difference can be seen in that respect compared to previous years. The share of students passing the exam was high, even when comparing with previous years, and their general satisfaction, judging from the LEQ, was also high. We think that is an indicator that the pre-recorded lectures added value to the course. It was for sure not only pleasant to spend all the time needed to produce the recorded material, and it would likely not have happened unless we felt forced to, but now the recorded video clips is a real asset and we will get return on investment of making them for many years to come. We will definitely keep using pre-recorded videos as part of the course material. To some extent some of the students' satisfaction might indicate that we just managed to do it slightly better than in other courses, and that they were pleased with that on a relative scale rather than by absolute measures. It is hard to tell but we did for sure make an effort to do it well (!) and it is very rewarding to share the students feedback after having struggled so hard to make it work.

The following changes are planned for the next course round:

- Keep using pre-recorded material as a vital part of the course content
- Emphasise lightweight structural principles more
- Emphasise the strong link between lightweight structures and sustainability
- Engage one more guest lecturer