

STINT Teaching Sabbatical 2022



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School of Mechanical and Aerospace Engineering



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In this report I present the experiences from my Teaching Sabbatical at NTU in Singapore during the fall semester 2022. After some words about the preparations, focus is on teaching and other pedagogical issues. Thereafter, I share some thoughts on living in Singapore and wrap it all up with some tips to future STINT fellows.

Preparations

As it turned out, my academic-related preparations were very limited. On the other hand, I spent a lot of time dealing with accommodation and administrative issues.

Visa

When working in Singapore, you need an *employment pass*. If someone is accompanying you (and he/she is not working), he/she needs a *dependent pass*. As NTU was my “employer” (although not paying me), me and my wife filled in the application forms and sent them to NTU, where the International Office completed the applications and submitted to the Ministry of Manpower. This made the process easier for us, but still we needed three attempts to get all parts of the forms correct. The SGD 105 application fee per person (ca 800 SEK) is normally paid by the applicant, but due to payment problems NTU took the cost.

It turned out that passports must be valid 6 months from the submission date, something that forced my wife to renew her passport earlier than planned. However, passport queues were ridiculously long, so it took many weeks to get this done, which could have put us in a situation where she would have had to postpone her trip. After submitted applications, 8 weeks is the Ministry’s normal handling time, but in our case, it luckily took only 4 weeks to get them approved. At this stage you get an *In Principal Approval (IPA)* letter, which you need when entering the country. Sometime during your first weeks in Singapore, you must visit the Ministry to transfer the IPA to the real pass. This is a rather ineffective procedure, for which you pay another SGD 255 (ca 2000 SEK).

Contacts with NTU

During the planning I was in touch with a few different persons at NTU. Some people from The International Office helped out in the Visa procedures and provided me with contact persons at “my” department and other instances.

In mid-January I had my first online meeting with my main contact person at MAE, the School of Mechanical and Aerospace Engineering. Since Singapore still had rather strict covid restrictions, short-term foreign visits were not allowed and therefore no planning trip could be performed. I thought we would have repeated online meetings, but for some reason, our communication continued via e-mail. This way, I received information about the courses offered during the fall within my field, and after some discussion one course was selected for me to take active part in. In the end of March, I had the first contact with the main teacher in this course. We had an online meeting in mid-April, where I got the feeling that he was not very well informed about the purpose of my visit and how much I was supposed to teach. In June I received some complementary information but when leaving Sweden, I still did not know many details concerning my teaching. However, I was rather confident that I would be able to handle this.

I also had an online meeting with three representatives from The Centre for Teaching, Learning, and Pedagogy (CTLP), who encouraged me to get in touch with them when settled down at NTU and declared that I was welcome to visit all their activities.

Accommodation

Normally, NTU offers “faculty housing” to STINT fellows. However, the building of a new MRT (train) line through campus has limited this availability. Therefore, this option was not available this year (and will most probably not be the next 3-4 years). We were not informed about this until mid-May, which put us in a stressful situation. NTU supported us with some web links to private housing companies, but more or less it was up to us to fix our accommodation.

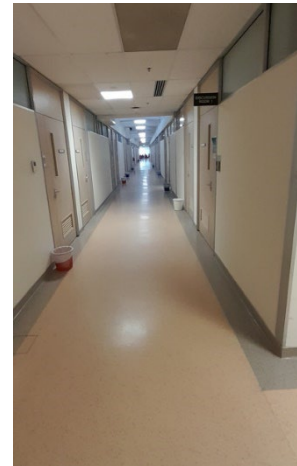
Making things even worse, costs for housing in Singapore has sky-rocketed the last few years and the rents turned out to be so high, we thought they were trying to fool us. Another problem was to assess the standard of the offered units from pictures and short videos, and to assess the location (in the last minute, we understood that a unit we were about to sign up for was located next to a go-kart track). This was a new situation also for STINT, since the monthly rates heavily exceeded their calculations, and they did not know how high a cost they could support. Finally, in the end of June we signed up for a 35 sqm one bedroom flat for SGD 5 000 a month (approx. 38 000 SEK) without knowing if we would get this cost covered (which we finally did, though). Actually, these six weeks were painful and did heavily take down our enthusiasm for the trip.

Teaching and other pedagogic experiences

MAE - my host department

Before getting into the pedagogical issues, a few words about MAE, which has approx. 100 faculty plus administrative and technical staff. They also engage many external teachers to deliver specific courses. The school is housed in one of the older parts of NTU, and to be honest, the indoor settings are not too inspiring with long corridors and offices painted in an institutionally beige colour.

MAE offers 2 undergraduate (BSc) and 4 graduate (MSc) programs. PhD education is given in 13 different sub-disciplines within Mechanics and Aeronautics. My discipline, Logistics and Supply Chain Management, is not a core business for the school, and occupies 3-4 teachers (+ externals). There is a graduate (MSc) program in Supply Chain Engineering, though, and one supply chain course is also offered at the undergraduate level.



My not-so-inspiring corridor

Pedagogical discussions

Unfortunately, and surprisingly to me, there were no forum for pedagogical discussions at MAE, like seminars, meetings etc. Neither did I encounter any informal pedagogical exchange between teachers. I approached several teachers during my stay at MAE, but it never developed into any relations where we had a pedagogically rewarding exchange. There is one exception, though. One of the external teachers delivering a course at the graduate program invited me to her course and to discuss both content and pedagogical forms.

My teaching duty

The course Supply Chain Management and Logistics is offered as an elective course in the final year of the undergraduate program in Mechanical Engineering. It runs over two 7-week blocks of teaching, with a recess week in-between. The examination consists of two quizzes (at the end of each block) and a written examination. Each week is dedicated to a certain topic. To each topic there is a pre-recorded lecture available. Students are supposed to watch the lecture, read recommended parts in the textbook and (for some topics) work with an assignment, before attending the 1-hour class in a lecture hall.

Hence, the students only meet the teacher one hour a week. The teacher has two contact hours, though, since the students are divided into full-time (daytime class) and part-time (evening class).

The main teacher and I agreed on six topics for me to deliver. It was then up to me to decide what to deliver during these classes, if I wanted to give assignments to the students, select suitable reading in the textbook etc. Since I considered some relevant aspects to be missing in the textbook as well as in the pre-recorded lectures, I more or less gave short complementary lectures during my classes. I also constructed assignments for the students to prepare and discuss during class. However, it was difficult to get a discussion going, since the students appeared to be unwilling to express their opinions, unless being sure they were correct.

Since all classes were automatically recorded and uploaded to the course's learning platform, there was a very low attendance to the classes. An average daytime class was attended by 15-20 (out of 110) and the evening classes by 10 out of 40.

I constructed quiz and examination questions connected to my parts of the course and also marked these questions.



Screenshot from one of my recorded lectures

Observations

I was allowed to sit in at lectures in four different courses at the master program. I noticed that the student activity was rather low also at these classes. At three of these, the lecture format was rather traditional, with (more or less) one-way communication and slides filled with text and information.

The fourth course was different, where the teacher invited the students more and managed to spread some of her energy to the students. In this course, “Procurement and Supplier Development”, I was also engaged as a co-assessor in a negotiation exercise. The students had prepared in groups before meeting each other as buying and selling companies trying to close an agreement on certain products.



Negotiation exercise

As this exercise has some similarities with an exercise we use at a course at LiU, I had an interesting discussion with the teacher afterwards. In another assignment in this course, the students choose a topic within the frames of the course, make some research and report in the form of a video. When watching these videos, it was obvious that this task had engaged the students and made them search for information beyond the lectures and assigned reading.

Centre for Teaching, Learning, and Pedagogy (CTLP)

CTLP offers courses, workshops, and other support with the purpose of developing the faculty's pedagogic competence. I was invited to follow their activities, which I did on several occasions. Mostly, I also discussed the sessions with the teachers afterwards. Moreover, I met up with the faculty to chat over a coffee on some occasions, and they also invited me out for lunch. I realised that many of their activities comes close to what we do at Didacticum, the corresponding unit for pedagogic development at LiU. Some of the activities I participated in are briefly described below.

Teaching Assistant Programme (TAP)

Teaching assistants (TA) are used in many courses at NTU. TA's do not have a fixed position at NTU and many of them do PhD studies in parallel to their teaching. During the one-semester long TAP, the participants take 8 different modules. In one of these, “Microteaching assignment”, the participants

prepare and deliver a 12-minute teaching session for their course peers. There are many aspects prescribed that should be considered in a plan they hand in beforehand and covered during the teaching session. After the session, there is a group discussion, where each of the peers are to give constructive feedback to the presenter. I spent an afternoon listening to a number of presentations and was surprised how well they managed during the 12 minutes they had available. It was obvious that they had spent a lot of time preparing their sessions. The participants' performance was marked by the teacher "on the go" with help from a rather detailed marking scheme.

Foundations in University Learning and Teaching (FULT)

The FULT program is directed to teaching faculty. This course consists of a number of modules covering e.g., Course design, Learning outcomes, Assessment, and Constructive Alignment. I attended one module with focus on assessment. The participants had watched and read some preparation material, and during this session there were several creative discussions among the participants with some guidance from the teachers.

Pedagogical conference

CTLTP arranges the annual "From Good to Great" Higher Education conference, which I attended. In addition to internal speakers, there were two keynotes from international guests (Germany and Australia), who also held half-day workshops. I participated in plenary sessions as well as workshops.

Seminars

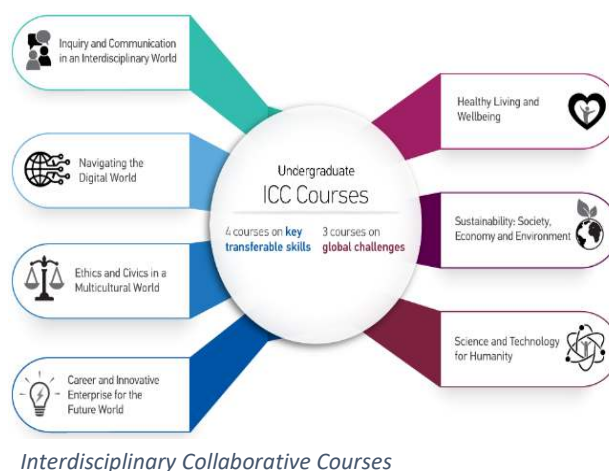
I had the opportunity to give speeches at two online seminars arranged by CTLTP. The first was directed towards an association of pedagogic developers from different universities, who meet regularly to discuss issues of common interest. My speech was about how we have organised the pedagogic development activities at LiU, which lead to a discussion about similarities and differences between our ways of doing this.

The second seminar was offered to all NTU faculty. At this occasion I gave examples of active, experiential learning activities at LiU and shared my thoughts about how to create a community of practice which supports collaboration and pedagogical development. Approx. 60 persons attended the seminar, and there were several questions and good discussions after my presentation.

In addition to this, I also attended two other seminars arranged by CTLTP.

Interdisciplinary Collaborative Course

All undergraduate students at NTU must take seven *Interdisciplinary Collaborative Courses* during their first two years of study (in total 17 AU¹). The idea is to give the students a core of knowledge which is relevant to all disciplines, and at the same time promote teamwork and collaboration. Group assignments and projects are essential in these courses, and the groups are composed by students from different educational programs. Each course is offered once a year, which means a very high number of students. All plenary teaching is therefore offered online, while tutoring, group presentations etc. may be online or at campus.



¹ Full-time studies correspond to 30 AU (Academic Units) per year.

I had the opportunity to take part in project presentations in one of these courses, *Career and Innovative Enterprise for the Future World*. As part of the course, students work in groups of 5-6 to generate ideas and make a business plan for real companies, facing some kind of concern about how to move forward in their business. They present their suggestions in a written report and an oral presentation. This year, more than 2000 students were enrolled to the course, six teachers handled tutoring and assessment (approx. 60 groups per teacher!), and a number of other teachers helped out with co-assessment.



All dressed-up for a few minutes in the spotlight

I was invited to join some of the presentations, first as a viewer, then as a co-assessor. To be first-year students, I regarded the presentations to be very well-prepared. The time allocated to their presentation was just 8 minutes, to give much room for Q&A's from the assessors.

With roughly 1.5 minute allowed for each student to speak, they were forced to keep a speed in their speeches, making it rather hard to follow. Asking broadening questions afterwards revealed that most students had difficulties talking “outside the box”.

At this oral presentation, each student was assessed individually being marked on four different criteria (containing sub-criteria), something I found difficult given the short timeframe.

During the oral session, there was no time for giving feedback to the students. From discussions with the teachers afterwards, I understood that the students hardly don't get any feedback except the marks on their report and the oral presentation. The teachers quite simply regard they cannot find time for this.

Take-aways when back in Sweden

My general take-away when comparing my impressions from NTU with my experiences from LiU is that we can be proud of what we are doing at my home department. We have a living pedagogical discussion, we cooperate with each other with the purpose of improving the courses, we strive to engage the students and provide good learning experiences. Although I saw signs of this at NTU, so far, I would say that this is intentions rather than reality. Partly, I believe this is due to Singapore traditionally having a more “old-school” educational approach, where root-learning has been supported, and where the teacher has been “telling what to learn”. Another reason is that teachers seem to have a higher working-load compared to Sweden and a higher pressure of performing within teaching as well as research.

However, there are some ideas I bring home that might be implemented one way or another.

Cross-disciplinary courses

I like the idea with mixing students from different educational programs. Working together with students with diverse backgrounds, values, pre-conceptions etc. forces you to be more open-minded, to see things from different perspectives. In working-life, you will most probably have to work together with different kinds of backgrounds, why preparing for this during the education is a good idea. I think, though, that it might be even more interesting to do this in the later parts of the programs, to allow the students to use their respective expert knowledge they acquire during their studies. I do recognise the organisational problems with arranging courses that crosses through program- and faculty borders, why this type of courses must be supported on a high level to be able to introduce.

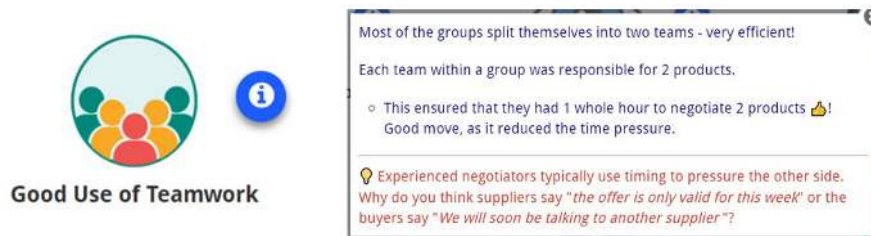
Examining oral presentations

Although I regarded the marking protocols a bit too detailed, I think the assessments of oral presentations worked well, in the cross-disciplinary course as well as in the TAP program. We already use oral presentations as part of the examination in our courses at LiU, but we might improve the way we assess these presentations.

As a complement to traditional oral presentations, letting the students make video presentations (as in the “Procurement...” course) is an interesting form, which I think we might test.

Formats for feedback

In the course “Procurement and Supplier Development”, the teacher puts down a lot of time giving feedback to the students on their reports, presentations etc. She admits this is time-consuming, but she still wants to do it, as she thinks it contributes to students’ learning. For some parts of the feedback, though, she uses material prepared before-hand, based on previous experiences. This allows her to give “semi-personalised” feedback in a rather efficient way. She also provides collective feedback on the learning platform. This feedback is presented in an “appetizing” way by using symbols and short texts.



Example of feedback on the negotiation exercise

Checking the content of exams

All written exams are prepared several weeks before the exam dates. The exams are handed in to an assessor together with a form telling how difficult each question is and which of the Intended Learning Outcomes are covered by each question. Using an assessor seems to me just an unnecessary level of work and control. However, I like the idea to critically check whether the exam covers the learning outcomes. Hopefully, this is something we implicitly do already, but I think it might be good to make explicit to examiners, that this is something to consider when constructing an exam.

Living in Singapore

Climate etc

Singapore is close to the equator, so be prepared for heat and humidity. Both me and my wife found this rather hard to cope with. With a temperature normally between 27 and 33 degrees, all-day, all-year around, you get warm and sweaty whenever you step outside, and excursions, walks etc. are exhausting.

Accommodation

If not provided by the university, start searching early. Ask the university for recommendations and try to have 3-4 alternatives ready to visit during the planning trip.

As described in a previous section, if not staying at campus, accommodation is expensive, and it is not easy to know where to stay. Actually, it is a matter of preferences. Do you appreciate short commuting time to the university, or do you prefer being close to the city centre? Are you happy staying in the middle of the concrete jungle, or would you like a park to stroll around?

We choose to stay in Jurong East, a so called “town” between NTU and the city centre. This meant 30-40 minutes commuting in each direction. In hindsight, we would have preferred to stay somewhere more central, since I did not have much exchange with the colleagues at NTU and therefore could do much work from home. Especially for my wife, who had “unlimited” time to spend, this would have made her days a lot easier.

However, since there were very few tourists and westerners in Jurong East, we felt like being in the “real” Singapore. We hang around at the same restaurants and shopping malls as the locals. Although we did not become familiar regulars, at least we got to know our neighbourhood rather well.

What to see and do in and around Singapore

Due to the climate, outdoor activities are not that common in Singapore. The major pleasure seems to be (window) shopping and eating out, since this brings you indoors, where it’s air-conditioned. And if you’re into shopping, this is paradise, not because it’s cheap (‘cause it’s not), but because of the countless number of shopping malls.

The restaurants are also countless, and represent all kinds of kitchens, mainly Asian for natural reasons, and all price levels. Generally, eating and drinking is expensive compared to Sweden, but there are exceptions. The “hawker centres” are conglomerates of street-food dealers, available in all parts of Singapore. You get cheap food there, but that’s not the only reason to visit them. Many of the hawker stands serve real good food, and you’ll get a very specific atmosphere, although far from luxurious. In most shopping malls, you’ll also find food markets, rather similar to the hawker centres.



Simple, but delicious hawker meal

There are a lot of “must see” sights in Singapore, but you will surely buy a guidebook describing these better than I can. Just a few tips that might not be highlighted in these books:

The City Gallery provides good and “easy-to-chew” information about how modern Singapore community has developed as well as the future plans regarding traffic, housing, sustainability etc.



Firing the dragon kiln

Thow Kwang Pottery Jungle was for several years an important producer of pottery (of course) using an old “dragon kiln”, a wood-fired 30-meter-long clay oven. Today, it is used to maintain the heritage of this old technique and is fired once or twice a year, filled with artwork and handicraft made by local potters. The place is worth visiting just to see the kiln and know about its history, but also to watch the creative spaces and all the things for sale. If you’re lucky, the kiln might be heated during your time in Singapore. My wife was engaged in the creative work at the pottery, so we took active part in the wood-firing.

Despite the heat and humidity, I recommend visiting some of the *nature reserves*. You might think of Singapore as nothing else than skyscrapers and traffic, but there are rather big areas of nature preserved. You don’t get access to all of it, and you are more or less referred to follow the marked trails, but you will see some wildlife and get away from city noise for a while. Try for example *the MacRitchie Reservoir Park*, with nice sceneries alongside the reservoir and a treetop walk taking you to the rain forest treetops.

Going abroad, e.g., to Indonesia or Malaysia is easy. There are cheap flights, but you can also go by boat (Indonesia) or bus (Malaysia). We made two “extended weekend” trips to Malaysia, and before returning to Sweden, we spent some time in Vietnam.

General tips to future STINT fellows

Contact with the host department

I do recommend doing a planning trip, if possible. But prepare it well and try to book meetings ahead with different people. The more people you can meet, the better are the chances that you find someone matching you, both professionally and socially, with whom you can continue planning on distance. If you can't do a planning trip, head for repeated meetings with your contact person, and try to arrange meetings with other persons.

Given my experiences, low engagement from their side during the planning period might suggest that there won't be much interaction during the sabbatical either. If they don't seem eager enough at your host department, I suggest you state clearly what you expect to gain from your visit, and if you don't get good enough response after this, consider withdrawing from the sabbatical.

Visa

As Visa procedures may take time, start early, and make sure that your passports are valid long enough. I found it hard to understand the official application information. Luckily, NTU helped out here. Ask your university to support you, they know the procedures.

Take initiatives

People are busy with all their duties, so don't expect them to engage in you all the time. You must be prepared to take initiatives and to approach people you think are interesting to talk to. Of course, it's grateful with a host that helps you open doors and introduce you to people, but don't rely on it.

Explore the country

Even though your focus is on the academic and pedagogic exchange, don't get drowned in work. Take the opportunity to explore your city and your country.