

*STINT 2023 Final Report*

NATIONAL UNIVERSITY OF SINGAPORE  
TEACHING SABBATICAL

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## OVERVIEW

This sabbatical has been a long time coming. Despite planning to go in Fall 2020, Covid-19 halted my plans. By the start of 2023, it felt like the worst was over, and life at NUS would have returned to normality. My motivation remained the same: experience a similar course to my own, Introduction to Computer Science (**CS1**), but at a **much larger scale**. The delay was not entirely frustrating, as both emergency **remote teaching** and the emergence of **generative AI** created two new aspects of comparison between host and home university. Beyond the CS1 course, I also planned to investigate how pedagogical training is conducted; design a small course that complements a CS1 by focusing on the overlooked yet essential skills and tools; and deepen my own pedagogical knowledge. As one can expect, I over-planned, but was still pleasantly surprised by the outcomes of my sabbatical. It was a great experience both personally and professionally.

## PREPARATIONS

### 2.1 THE PLANNING TRIP

**Activities:** Due to teaching in Spring, I could only get Singapore by mid-May and teaching there had ended with most teachers occupied with grading. However, I was still able to meet three of the faculty I hoped to work with. This was really useful as we discussed ideas for the sabbatical as well as the impacts of the pandemic and generative AI. I was also invited to the teacher’s luncheon, with presentations followed by heated and healthy discussions amongst faculty. The main topics were all relevant and I left with the wonderful quote that “...if you teach a large

course with many teaching assistants, you are actually running a small-to-medium enterprise in disguise” – I wholeheartedly agree!

**Locale:** Otherwise, this was a nice chance to learn about the surroundings and acclimatise to the heat and humidity. The staff and visitor accommodation, Kent Vale (**KV**), is located next to the main campus (Kent Ridge). A free campus bus provides a convenient way to avoid sweating to death over what seems like a simple 10-15 min walk. There is an app for this service (**NUS NextBus**). The **BTC** service is convenient to get from KV to the School of Computing (**SoC**). Personally, I found alighting at **BIZ2** stop was the most efficient for my office location, but **AS5** also makes sense if I wanted to go to the Dean’s Office where the admin are located. Going home, the easiest option was the 17:15 **K** service that left from the Central Library (**CLB**).

The campus is a maze of connected buildings, but exploring will pay off and lead to optimal paths that provide shelter from rain and sun. One tip is to notice that if the ceiling is painted yellow you are on a main covered path that connect all buildings together. It is possible to walk from KV to SoC without every being exposed to the elements, just follow the yellow brick road ceiling.

For the basics of living there is a nearby shopping mall and hawker center at West Coast. Getting around with public transport was easy and well designed, but it moves slowly and stops frequently. I installed **Grab** (a do all things app) for ordering food, taxis and whatever else. The location of NUS means that getting downtown will take about 45 min by public transport or 15 min by taxi. However, everything works smoothly and is much cheaper than Stockholm prices – a welcome change!

All in all, I was glad I made the planning trip. It put my mind at rest as most questions of how to live where an-



Figure 1: Looking towards Block H from Block G within Kent Vale. I really enjoyed the architecture here, the use of plants all over the building, the inside-outside gaps on every floor, and the wonderful rooftop terrace.

swered. KV is luxurious, the apartment is serviced five days of the week and there is a complementary breakfast served every day. The only question remained was how the sabbatical itself unfold. But before that, the visa nightmare had to be handled over the summer months.

## 2.2 VISAS, EVENTUALLY

**Process:** Start early. Everyone says it, but the process can be very slow. Documents can be bounced back and forth several times for corrections and clarifications and it is re-

ally hard to predict how long anything will take. The process should take eight weeks, however post-pandemic there is a flood of workers coming back. In the end, my visa was only approved two weeks before the arrival date. As accommodation depends upon having approval, it could only be confirmed afterwards, which added to the stress as there were supply warnings for accommodation at KV.

A further source of stress and shame was the perfectly innocent questions of interest from friends and family all through summer, “So, when do you go? Where will you live?”. Looking back, everything worked out, but it can feel like the process is slowly spiralling out of control as the clock runs down. That said, the administration at the SoC were helpful. They do a mostly great job under difficult circumstances – due to various periods of leave and illness, I believe the “backup to the backup” was handling my case and learning how to do so at the same time.

**Sambo:** As my partner was coming and we are not married, we had to find a way to make this official, as a document is required in order for them to grant my partner a Long Term Visitor Pass (**LTVP**) (which allows them to stay longer than 90 days and also gives them the freedom to work if they chose to). As former STINT scholars have noted, you have to create your own common law marriage certificate and have this notarised at a notarius publicus. There seemed to be very few examples online, so in the spirit of embracing generative AI, I asked ChatGPT to create a  $\LaTeX$  marriage certificate and then finished the job with some manual edits. The notary was a little confused at first<sup>1</sup>, but ultimately notarised the document with a cover page of legalese and a shiny gold stamp.

<sup>1</sup>They actually can only notarise that we are who we say we are, not the veracity of the document or sambo status

### 2.3 TRAVEL AND ENTRY TO SINGAPORE

**Arrival:** One tip is to use Immigration & Checkpoints Authority (**ICA**) online service to receive your SG Arrival Card (**SGAC**), up to three days before you travel. You can do this on arrival, but the form is tedious to fill-in after a long trip. If you plan to leave and return several times the app is worth getting. The immigration officers did not seem too interested in my other documents (Invitation Letter from NUS or the Letter of Approval for Visa from the Ministry of Manpower (**MoM**) and were mostly interested in the SGAC. Both the Employment Pass with Sponsorship (**EP**) and the LTVP were finalised after we settled in, so there was no stress there. We were worried that my partner would not have her LTVP approved before arrival so we booked a departing flight before the visitor period would expire, but it was not a problem in the end.

**Employment Pass:** Finalising the EP for myself was handled in the first week. This caused a bit of panic with the admin at SoC as the earliest appointment with the MoM was deep into September and I was informed that I could not work. Someone pulled in a favour and I was bumped to the front of the MoM queue and was done finalising my EP within two days. I’m not completely sure what was meant by “could not work” as I already had my NUS account and office key so I guess that they were following rules. On reflection, I suggest trying to book the appointment with MoM as soon as you know your Foreign Identification Number (**FIN**) and arrival date. Once you have an appointment, make sure to have a Singapore mobile number before going as it was required. My feeling is that admin work sequentially and do not realise opportunities to work on independent tasks in parallel.

**LTVP:** Finally, it took much longer for my partner’s

LTVP to be finalised. The only implication of this was that we could not use the discounts that it affords. In a perfect world everything would have been settled before we travelled, but for anyone who ends up delayed in their preparation or lacks dependent visas, my message is it will work out in the end, no one really makes any attempt to stop you entering the country, and the staff at SoC will really do everything to fix these issues (just sub-optimally).

### 3 BOOTS ON THE GROUND

#### 3.1 LIFE IN SINGAPORE

**Climate and Clothing:** There should be no surprise that Singapore has very consistent hot and humid weather and you should pack appropriately. Jokingly, there are two seasons in Singapore - indoors and outdoors. Indoors, the air conditioning is almost always too cold – I had to take breaks from my office just to warm up. Outdoors, walking for more than a few minutes will result in some sweating – you learn to accept and embrace this. Save yourself some kilograms in your luggage and pack more for a summer vacation than a business trip. When it comes to rain, as Fall advances the rainy season starts to become a factor, but the infrastructure is designed to avoid getting caught out by the daily thunderstorms (which are epic!).

**Attractions:** Singapore has a lot of attractions for visitors, but for us the overwhelming winner was the nature and national parks. Whilst walking for hours in 30°C weather requires some amount of preparation, it is very rewarding in the range and diversity of nature you will encounter. There are wonderful elevated walkways in several parks that send you up into the canopy and beyond that should not be missed. The Southern Ridge park is on the



Figure 2: Out on the boardwalks on Pulau Ubin. Located to the northeast of Singapore, it requires a long trip and a short ferry, but you are rewarded with fascinating ecosystems and one of the last surviving kampongs.

other side of the campus and makes for a nice local introduction before exploring the others. Also, don't miss the chance to catch a ferry to Pulau Ubin and cycle around exploring the mangroves, rainforest and one of the few remaining untouched kampongs (traditional village).

**Safety:** In terms of safety, we both never felt any worry about ourselves or our possessions. Truth be told, it felt more secure than Swedish cities. There are signs everywhere reminding citizens of correct behaviour and for the most part people are abiding by these signs. Initially they feel a little overbearing ("*Please do not wash yourself at this sink*" – seen in the staff common room at SoC), but after four months of living in the society, you start to have the



Figure 3: An example of the overwhelming nature on campus - a student stands alone outside the central library, lost in their phone and the hundreds of spreading branches.

creeping feeling that maybe this works. Well, I remain undecided on this, but the general level of behaviour is very polite and easy to fit into. At least I did not have to witness staff washing themselves in the coffee room.

**Transport:** As mentioned, public transport is easy to use and cost effective. One can buy a travel card and charge it with credit at any MRT/metro stop. There is an app (**SimplyGo**) that lets you scan your travel card and read its balance, assuming your phone has NFC capability. You can use your bankcard at gates, but these small transactions might cause conversion fees on your Swedish bank account. You can still use cash, but it feels more expensive and confusing. Once on board, it is slow going due to the number of stops, but it is not hard to reach all parts of the island. Booking a taxi is easy with apps like Grab.

**Mobile Phone:** A practical tip is to pick a **SingTel** SIM card at the airport (sold immediately after baggage). We got by with the top up \$50 card for the first 8 weeks and only used the data part of the service. A tip might be to re-search the options before travelling so that it is not so over-

whelming making a decision after arrival. The SingTel app (**hi!App**) was mostly easy to understand how to maintain your account and continue topping up. It did eat \$13 in the final week when we just needed a few days more on our plan, so do check before you click as this was a sour note on an otherwise good mobile experience.

**Money:** Prepare to carry cash again. This was a bit of a shock, but it helps to carry it as almost everyday there will be some need, be it for a quick cup of Kopi (Singapore's unique take on coffee) or something larger. Most hawker centers are cash or special payment apps like **PayNow** or **PayLah**. I decided not to try these apps as some of them require a bank account in Singapore, but had I stayed longer then maybe it would be worth setting up. We had no issue with our Swedish bank cards anywhere we used them. The nearest ATMs to KV can be found at West Coast Mall on the ground floor.

## 3.2 DAILY LIFE AT KENT VALE

**KV-Life:** This was a treat. A large majority of staff live in this campus as well as all the other visitors. The breakfast provides a great opportunity to meet and get to know other fellow visitors. A tip I was given during my planning trip was to sit at the big table (or make a big table) and eventually others will sit and get to know you. There are always people with varying stays at NUS and it is nice to interact, share tips, socialise and learn about others' experiences of NUS and Singapore. We got to know at least 5-6 couples via bumping into each other at KV so make an effort to reach out as it enriches the experience.

The visitor accommodation is mostly in the three high rise blocks. We had a 1 bedroom apartment on the 12th floor of the G block. It was small, but worked. If things broke, the service desk fixed them promptly. Housekeeping came during the weekdays so you barely have to clean. Some things felt unnecessarily frugal - there were not enough coat hangers and there were only two of each kitchen item (2 cups, 2 plates, etc). Most people solve this by going to the West Coast Mall where there are several shops selling inexpensive essentials. Failing that, there is a nearby IKEA for any other needs and a reminder of home.

**Visitors:** Whilst we planned for visitors, the stress of securing any accommodation meant we skipped on the larger apartment. We thought it would be fine to borrow a mattress from friends for guests as there would be space, but when we checked with the reception, they informed us that the one room apartments were not permitted to have extra guests. A friend from Yale actually got into trouble over trying this without permission. Apparently it was reported by housekeeping and they received warnings from their department. If you plan for many visitors,

look into the larger apartment and work out if the budgeting is cheaper than having hotels. If you travel alone then it should be ok to have a visitor stay.

**!Cooking:** As the household chef I took a four month break. There is actually no need to prepare food for yourself as the food culture seems to encourage eating out at both hawker centers (very cheap and efficient) and restaurants. Others did cook for themselves, especially those with allergies, but the kitchen equipment is very basic. I took it as a nice opportunity to enjoy not cooking and cleaning, and when a basic meal costs around 30 SEK it is hard to argue against. That said, Singapore cuisine is the poor cousin of its Asian neighbours. You will find restaurants for all cultures and the quality is very good, but for the hawker center food there is a lot of repetition and lack of fresh ingredients as every last detail is optimised for cost and speed.

**Malls:** In terms of the nearest food and shopping malls, West Coast Mall is the closest and can be accessed by walking across KV, then leaving by the rear gate (no fear, your room card will open this gate) and walking down the park before taking a right along the road. There is a large Cold Storage shopping market in the West Coast Mall that will satisfy most needs. Opposite the West Coast Mall is its corresponding hawker center with 50+ places to eat. We preferred the well lit section at the back corner heading away from KV (shown in Fig. 4). Further on, there is another large two floor supermarket, Sheng Siong that is cheaper than Cold Storage with a different selection of goods. Otherwise, if you take a short bus ride or 25 min walk you can get to the much larger Clementi Mall with its own hawker center. A nice inclusion is a Uniqlo in case you are needing to buy lighter basic clothes for the heat. There is a MRT/metro stop here as well as a cinema nearby.



Figure 4: Meet and eat with all of Singapore in one place, the ubiquitous hawker center. Each center typically has anything from 10 to 60 food stalls depending upon the number of residents they serve. Fast, cheap and tasty!

### 3.3 FURTHER AFIELD

We will not burden you with the details of our travels, but the joy of Singapore is how convenient it is for multiple trips to nearby destinations. We made trips to Vietnam, Sri Lanka and Bali with ease. Flights are 2–4 hours to most nearby countries. Perhaps a minor regret is that we did not make more trips as it was easy to leave and return to Singapore – our American friends seemed to travel every other week. Make time to treat yourselves with rest, relaxation and enjoy a little bit of revenge travel <sup>2</sup>.

### 3.4 ONBOARDING WITH THE SoC

Finally, getting integrated into the SoC is much as you would expect – a whole range of systems to sign up for. Managing multiple Outlook and Zoom accounts was a new circle of hell I encountered as I insisted on maintaining some duties at my home university. Nothing worse than trying to get into a Zoom meeting but having the wrong account logged in.

<sup>2</sup><https://www.economist.com/the-world-ahead/2022/11/14/take-that-covid-revenge-tourism-takes-off>

Some things were a little tricky with integrating into the SoC systems, but the admin helped and there was good online documentation with setup tasks. I needed at least two different online authenticator systems (Symantec and Microsoft – which needs a credit card) to clear the initial setup. My *pro pro pro* tip is not to ruin your laptop by installing everything recommended. Use your common critical sense; only do things you actually have a need for. After having Outlook and Canvas setup, there was little else I judged as important, despite the stream of emails reminding me to install this and that. As a cautionary tale, a professor from ETH had their laptop utterly compromised by installing such systems and totally regretted doing so. In the worst case, there is campus wide access to **Eduroam**, so you are never dependent on SoC or NUS specific systems. There is also Eduroam access at KV, but only near the reception.

Despite the positive experience with the admin, one cultural adaptation I had to make was how to interpret no-reply to some of my requests. At home I take this to mean that someone is busy and I should remind them in the near



future. Here, it was often code for, "No, I either cannot or do not want to do that". If you sense this, just go and talk to the admin as it is harder to ignore physical presence and things will quickly start to happen. Ultimately, admin was nice to me, took me for lunch at the beginning and end of my stay and mostly answered my requests in a good time. It might help to have WhatsApp as that is the main way after email that they communicated with me.

## 4 SABBATICAL ACTIVITIES

### 4.1 CS1101S – PROGRAMMING METHODOLOGY

This was my main objective. Immerse myself in the running of CS1101S – Programming Methodology and try to learn how I might scale my own courses at home. This course has over 800 students, roughly 4 times larger. What stands out in particular is the size of the TA team: 100+ senior students who guide groups of eight students. The other interesting aspect of this course is that they have built their own immersive learning environment for their students called Source Academy.

Having read previous STINT reports, I was forewarned that the workload of this course, both for students and teachers, is intense and unyielding. As I wanted to save time and space for other objectives, I purposefully declined face-to-face teaching. As I have taught abroad before in different Asian contexts, I already had a sense of the impact of teaching another culture and felt there was less to learn repeating this. So I chose to be the fly on the wall in all course moments and on balance I was happy with this decision. That said, I found it grounding and rewarding to attend weekly help sessions for struggling students and sit with them and help them through their misconceptions.

The course is shouldered by four kind and dedicated academics: Martin Henz, Boyd Anderson, Low Kok Lim and Sanka Rasnayaka. They separated the responsibility of delivering each major part of the course evenly. All were present for lectures (still on Zoom as for 800 students it makes sense) and supported the students by being active in chat. The admin was shared and there was always fast communication with no request waiting for more than a few minutes; I truly was impressed with this as an example of supportive co-teaching - something we should have much more of at KTH.

For the TAs, there are seniors and juniors, with the seniors having a cluster of 6–8 juniors. Each TA had themselves a group of eight students. This ratio impressed me compared to 1:15 that I manage to budget for at home. The sheer size of finding 100 rooms over two days meant that during any given studio (i.e. övning) there can be 5 groups sharing a large multipurpose room (see Fig. 5). When I observed these sessions they did seem noisy and distracting, and speaking to some senior TAs they preferred the days when individual rooms were possible. On the other hand, I could see positives were multiple TAs in a room meant they could support each other.

One surprise was the lack of participation in the weekly TA coordination meetings. Despite the large number of TAs recruited, few made the time to attend these meetings. This is in stark contrast to my KTH experience where meetings are informative and playful; we all aim to help each other get better at teaching students. I guess the majority of TAs do watch the recording, but that feels like a real miss for development.

As mentioned, the workload was intense. On the NUS-Mods website, there was a consistent pattern of reviews that appreciated the course but challenged the amount of



Figure 5: Students engaged in active learning during the weekly studio session. Students work in teams of eight guided by their teaching assistant (TA). Note the average devices per student is about 2.5 - laptop, mobile and tablet seemed to be the norm.

work that was required, with many suggesting it was near double the number of credits and quite often the tasks you needed to solve would take hours with no sense of tangible progress. But this seems to be an arms race; the constant competitive nature of the education system from the earliest stages sets up a cadre of elite students who push the course leaders to add more topics that I considered well outwith the modern CSi experience.

This led to a weird situation where despite the teachers recognising a growing mental health problem in the 3rd week of a 1st year course, they decided at the end of course review that it was a bit too slow at the start and they could fit more topics in! I'm not sure where this ends, but my feeling was that the students are conditioned to be exam optimizers and left with little time to develop the human level creative and collaborative problem-solving skills that real life demands. I really felt happy that in Sweden, we do truly try to center learning around the individual student, and not the status of achieving the highest possible grades.

In the end, it was a pleasure and a challenge to follow

the course and I was involved at all levels that I was curious to be involved with. The extra events like the SumoBot challenge (think Robot Wars) show that the teaching team really cares about creating an immersive experience. The online learning environment is unmatched in my experience of studying such tools. The only lingering concern was the mindset that piling more work on students somehow equates to quality education. Teaching a few things well is much better than teaching many things that are easily forgotten or never successfully transferred to new contexts.

#### 4.2 CSooioS – THE MISSING BIT

This was actually a major disappointment. My plan was to develop a course that is short, self-directed and teaches the essential skills and tools that a computer scientist will use through their studies and future career (Terminal programming, text processing and collaborative version control). Most computer science degree programmes manage to miss this type of content, and NUS was no different in



Figure 6: A SumoBot ready for battle. Students developed battle strategies as part of the course and then a lively tournament was held to determine the ultimate winner.

my opinion – students are left to their own devices. This was meant to be an underground grassroots effort driven by volunteer TAs that cared for the junior students development and competence.

I managed to recruit a team of interested TAs who shared my vision. We met several times to design the elements and delivery of the course, but ultimately failed to deliver a complete course ready for students to take. So, what went wrong? Well, from my side I had opened up so many areas of interest throughout my sabbatical, this project never had my complete focus. At KTH we have already designed a similar course so I was not as motivated with the chance to reuse. I also overestimated the amount of free time the TAs had – basically none. This was a surprise as my experience with Swedish TAs has been great; once they get on board with a project they really engage

and make time. Finally, witnessing how crushed the student schedules are already, I doubt that many would have the time for an optional non-credit bearing activity. So, lessons learnt on this one.

However, we did develop a great collaborative design for this course that is quite unlike what else we have at NUS, KTH or other universities that have recognised the same problem (notably the Missing Semester at MIT which was the base inspiration). As I was leaving, the most interested TA and I discussed that this is something we should both continue working on in the near future...when we find the time ;-)

#### 4.3 TEACHER AND TA DEVELOPMENT

One of my side missions I set for myself was to engage with the teacher training aspects on offer at NUS. Early in my sabbatical, I made contact with staff at the Center for Development of Teaching and Learning (CDTL). They were very happy to make time for me and present their work. One total shock was that there was no requirement for a NUS teacher to have completed any form of pedagogical development. A head of department could make this a requirement, but it did not seem to be prioritised. However, the CDTL offered a wide range of opportunities to develop professional skills and I very much appreciated being able to attend many events that took my interest. Ultimately, I became so well known to them through attending and participating in seminars that they invited me to share my own thoughts in a seminar.

Staff at CDTL presented their approach to training both undergraduate and postgraduate TAs. I was quite impressed with their course design and definitely will report back to our own course responsible for TA development. Most important was the opportunity for con-

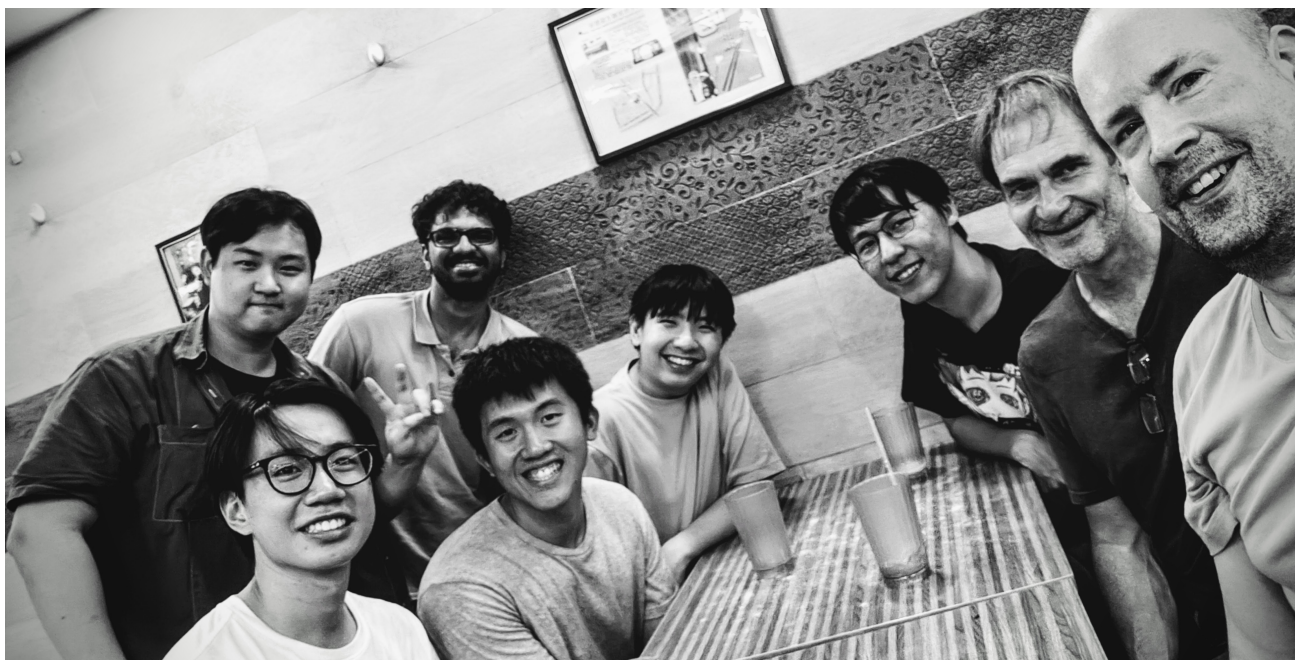


Figure 7: Inaugural cluster meeting of senior teaching assistants (TAs), Martin Henz and myself. To improve transfer of knowledge and resolution of issues, senior TAs would repeat the cluster meeting with their junior TAs with a budget for food and drinks.

tinuous development and opportunities to have teaching experience first, then continue their development (rather than train first then teach with no further formal development). There was no problem to enroll me as a hopeful TA and gain access to their Canvas courses for the self-directed components of these courses.

Finally, one aspect I was impressed and envious of was the educator career track. One of my colleagues was navigating this and it was very interesting to discover how this path unfolds. At KTH we lack a career path for adjuncts who shoulder a lot of teaching, but have no real way to be recognised for their efforts through promotion. This was nice to see how it engaged the teaching-focused staff and encouraged them to build teaching portfolios that would contribute to their next career stage. In my experience, leaving it to intrinsic motivation is not enough to drive a teacher to step outside of their comfort zone and I think this dual track model is something sorely missing at KTH.

#### 4.4 DESIRABLE DIFFICULTIES

The biggest surprise was how I used the space and time throughout the sabbatical. I felt worried that I might have not engaged enough in face-to-face teaching, but over time, the wide range of serendipitous opportunities that popped up for me that I had the freedom to engage with reassured me that this was a good decision. Unlike at KTH where I rarely visit campus every weekday, I set myself a simple 9-17 schedule for the weekdays. Once in my office, unlike others, I jammed my door open for any and all to say hi!

As mentioned, I attended all of the CDTL pedagogical seminars that I found interesting as well as those from the SoC on more technical topics (e.g. impacts of generative AI). I also read a series of books that had been on my stack: *Structure and Interpretation of Computer Programs* (that CS101S follows); *How Learning Works*, 3<sup>rd</sup> Ed.; *Software Engineering at Google*; and the *Necessary Conditions for*

Learning. On top of this, I also started working on the other stack of research papers that had built up. I had the time to branch off into topics such as intersectionality and its application to computing education contexts, follow the developments in generative AI, as well as go deeper into learning and cognitive science, which led me to a topic I had been meaning to read more into: desirable difficulties.

Even the name provokes interest as difficulty does not often feel desirable. Yet, this is a crucial aspect of learning and my reading journey went back to the seminal works of Bjork and Bjork. As it turns out, this connects to some of the question-based learning research I have been involved in and I was surprised how my own misconceptions about learning were revealed. To bring some conclusive moment to my sabbatical, I used the CDTL seminar invitation to put a frame around this study and decided to try to communicate what I had learnt about how the memory operates when learning and how we often innocently frustrate long term retention and learning by not respecting this well researched area of cognitive science. In the end I was very happy with my seminar as not only did it give me a chance to talk about desirable difficulties such as the variation of context, generation effect, testing effect, spaced repetition and interleaved practice, but I also managed to make myself an expert in using Mentimeter to drive an entire interactive seminar that based all focus on questions and their resolution and discussion.

A final bonus of this pedagogical development was the chance to participate in the Higher Education Campus Conference (**HECC**). This was a one day event (and my final working day) that was packed with pedagogical presentations from across all departments and showed that the university had a strong desire to raise awareness of good

practice. Of particular note was the panel session on generative AI where all the directors of education from all the main Singapore universities got together to share the opportunities and challenges from their own perspective. I would like to see Swedish universities attempt something similar!

5

## REFLECTIONS

### 5.1 HOST VS HOME

I have already woven some comparisons throughout the report, but here I will try to summarise them concisely.

- The pace of education is very intense at NUS compared to KTH. Both staff and students suffer.
- Pedagogy is deemed important at NUS and KTH, but the main difference is the formal requirement at KTH that all teachers must be trained.
- At least in the course I shadowed, the IT environment and communication channels used are far more advanced than my home courses - much to learn from here. However, this is not simply having technology, it is the adoption and use by all staff and students that makes it work.
- Examination is surprisingly old school - having 800 students march into a single hall, then complete a MCQ and coding exam on paper seemed unusual for a modern CS1 course. The studio sessions were strictly controlled in terms of activities and it felt that at my own course we encourage TAs to be creative in their teaching, at the risk of introducing inconsistency.
- There did not seem to be any observable tension between the teaching and research focused groups of

faculty. As mentioned, the presence of an educator track gave ambition to the teachers I met and there was a sense of excitement that the first professors were soon to be appointed through this track. We have no such opportunities for teachers at KTH.

- Computing is a top degree in Singapore attracting the brightest students. At the same time the strength of the industry has been in decline leading to a lot of stress amongst students that picked computing simply for the salary. At least in the course I shadowed there was a strong emphasis on thinking as a computer scientist first, rather than developing the practical side of the subject that industry demands.
- As mentioned the presence of CDTL and a healthy stream of pedagogical events at least provides the opportunity for continuous development amongst staff; however, the sessions I attended were not exactly well attended (usually around 20 people, often regulars) and I suspect most staff are overworked and struggle to find time even if they desire it.

### 5.2 HOLDING ON AND LETTING GO

As this was my first sabbatical beyond summer teaching trips, it was a challenge to work out how much 'home' work I should do or not. I already discussed with my director of education that I cared about the smooth running of my course and there were some tasks that were trivial for me to run remotely and would save my cover teachers learning things that only become easy after many years. I also wanted to help my team of TAs, so I committed to the initial set of meetings where they are most dependent on support with their teaching and administrative activities. I never logged out of Slack, so I could follow all of the day-to-day messages from my course and from my colleagues. For

the most part the time difference (6hrs) was convenient as I could clear my working day in Singapore and then spend time in the evening when required for home tasks.

Was this a good split? I think I overworked the home side; not to the extent of damaging the sabbatical, but I did feel like my attention was split at times between developing myself and micromanaging distant courses. I console myself that this choice meant that my colleagues did not get crushed by my decision to go on sabbatical nor would I have a dumpster fire of a course to return to in January. I would advise any future STINT scholar to think through this aspect carefully. I was fortunate that I had the space, time and patience to deal with spinning multiple plates, but this might not work for others.

### 5.3 MAKING TIME FOR REFLECTION

Truly, the most significant positive aspect of the sabbatical was having the freedom to choose what I was doing and that I had no overbearing demands or responsibilities. I have the fortunate position where I have taught abroad multiple times in multiple countries, so there was not as much of a need for me to experience a different student culture directly through classroom contact. If you have not had the chance to teach in another culture, embrace it. But, do not let it pull you down into an endless cycle of preparation and constant occupation of your time. Having the chance to go to any seminar, workshop, conference, meeting as they emerged was wonderful.

Take this chance to have space and time in your schedule for unexpected things to happen. I kept my door open, against the norm for SoC faculty, and had various people drift in, chat, discuss computing and the differences in the Swedish/Singapore context. Had I been head down busy all the time, I would have missed these moments and con-



Figure 8: Unfortunately this was all too common a sight around campus. The competitive pressure, intense workload and constant stress only seems to crush students up against an impassable wall. I found this aspect of the sabbatical hard to handle.

nections. As the STINT organisers reminded us in the midterm seminar, the host university is not paying you, so you have the opportunity to plan and navigate the type of sabbatical you want to have. It is o.k. to say “no thanks, here is my plan” and stick to that.

#### 5.4 SCALING EDUCATION: PROS AND CONS

Observing a course four times the size of my own was both surprising and informative. Ultimately there was no great

trick to it beyond having a well staffed team of dedicated teachers who constantly covered each other’s backs as well as an army of eager TAs ( $n = 100+$ !). There is also great innovation in the learning environment for introductory programming that helps with the scaling and management that should not be ignored. However, the disappointment is that this is really a special case, a champagne course that overshadows all others. With my own course I feel sensitive to great sounding innovations as they must be realised in the wider context of the group of courses a student will take simultaneously. Eating more and more of a student’s time and attention with a highly immersive learning experience is actually a negative in my opinion. You can argue that why can’t all courses raise themselves to this level of ambition, but the simple truth is there is not the budget to support. The long term sustainability is called into question if all of a sudden there are the same budgetary demands from all courses. Still, this is an inspiring example of what is possible when everything is dialed up to the max.

#### 5.5 MISSION STATEMENT

The Singapore education system is exhausting – from the earliest ages children are pushed to achieve the highest grades. The environment breeds intense competition and standards continually rise skywards of what can be expected. Yet, this leads to stress and suffering. If anything I felt sad for the students that have to grind through this. Computing students, if you check their YouTube videos about studying at NUS, often discuss that they are dying, dead, or other states of exhaustion. Mental health is no joke and when it is already a topic of discussion and concern in the 3rd week of a first year course, something is going badly wrong. I constantly found myself concerned with how this was just accepted both by students and fac-

ulty. At one seminar a professor wryly remarked about the painful process of learning; no doubt a reflection on students' experiences in the now and their own experiences in the past.

From this I have solidified my own mission that we as teachers should **first** be responsible for reducing the naturally occurring suffering that education systems can impose upon learning by making illogical and extreme demands upon students when they have no power or position to push back and question the relevance. **Second**, we should look to curate culture and community in our courses to give the students maximum chance to find their squad, support group or other people to navigate their educational maze whilst learning. **Third** and finally, more is not more and we need to deepen our pedagogical awareness about how learning works and not fall into the trap of fire-hosing smart students with increasing amounts and complexity of information just because they are getting higher grades. **In short, reduce suffering, increase community, and understand how learning works in practice.** As I like to say: education is like organised religion – it takes naturally occurring spirituality and makes a total mess of it. As educators, we should try our best not to frustrate learning within organised education.

### MOVING FORWARD...

To conclude, here are some practical steps emerging from this experience:

- Appreciate and cherish the rich, diverse, creative and complex student culture we have both at KTH and other Swedish universities.
- Discover and integrate desirable difficulties into my own courses and share my findings with my col-

leagues and wider CS Ed community.

- Embrace AI and help find a place in both my practice and my students practice; exciting times lie ahead.
- Restructure my face to face lectures with students to focus more on questions, discussion and misconception resolution.
- Work on teaching assistant development - they are key to scaling courses and their evolving abilities are a vital asset.
- Find time. This was the most amazing sabbatical aspect and a habit that I will make a concrete reality in my normal context.

### RANDOM TIPS

- If you take a partner, encourage them to read the relevant STINT reports; you get a different interpretation of what can turn out to be important information.
- If you are bringing medicine supplies for more than 90 days there is an online service to check if you need to declare. Somewhat related, snus has gotten Swedes into trouble before.
- Consider joining <https://singapore.swea.org/> if appropriate to meet fellow female Swedes working and living abroad in Singapore.
- The NUS subreddit ([www.reddit.com/r/nus/new](http://www.reddit.com/r/nus/new)) is a raw slice of student opinions on NUS. NUSMods and NUS Whispers are also of interest.
- There are many Youtubers who document their student experience at NUS; well worth watching some to get their un-moderated opinions.
- Setting up a private VPN is a nice thing to have to keep up with Swedish TV.



- I like coffee, but I enjoyed diving into Kopi. There is a wonderful Kopitiam (coffee kiosk) in COM2 and a cup of kopi will only cost \$1 and the owner is charming in how he remembers your preferences.
- That said, I brought my Aeropress and a supply of classic dark roast coffee from Sweden which I very much appreciated. Bring a home comfort!
- Reach out to STINT scholars at NTU if there are any - it was really nice to visit each other's campus and arrange social events.
- There is a list of visiting faculty if you google hard enough – As I discovered more by accident, you can get to meet some pretty famous and friendly international academics.
- **Don't be afraid to say no!** STINT are funding you, not the host. This is your time to be in control and nurture your professional skills.
- and finally my partner **Joana** for being brave enough to say yes to life together on the other side of the world (after only knowing each other for four months back in 2019) ♡



Figure 9: Joana with Kent Vale rising in the background – many happy times with the light and colour in my life!

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To the next STINT Scholar, you have made a **great decision** in pursuing a sabbatical. It is a lot of hard work, but it is a wonderful opportunity to refresh and renew your teaching career. If you have any questions, contact [g1assey@kth.se](mailto:g1assey@kth.se) and I will try to help!