

# Teaching Sabbatical Report

## Fall 2018

Lessons learned from a semester at TIDES, CNS, Texas University at Austin, thanks to a fellowship from STINT – The Swedish Foundation for International Cooperation in Research and Higher Education

For pictures and more information, study my blog:

<http://blogg.hh.se/eva-i-austin/>



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## Introduction.

I was one (of two) of the first STINT fellows that visited Texas University at Austin (UT at Austin) during the fall semester 2018. I was kindly accepted by Sarah Eichhorn, the director of The Texas Institute for Discovery Education in Science (TIDES) in the College of Natural Sciences (CNS). This is an institute that aims to catalyze, support, and showcase innovative, evidence-based undergraduate science education. UT at Austin, as opposite to my home university in Halmstad, is a large university with almost 50,000 students on campus. At CNS I acted as a co-teacher in two different undergraduate courses. These were: The pioneering Freshman Research Initiative (FRI), which gives first-year students the opportunity to initiate and engage in real-world research experience with faculty and graduate students, and the other one was an Freshman Research Initiative-[Scientific Inquiry Across the Disciplines](#) (SIAD) class, formerly known as Research Methods, it is a signature course that some students take as part of their first semester in FRI. Since I have not come across this kind of courses before this was a new and exciting experience.

## Preparation and planning

I started, by email the three persons on the list STINT provided me, in January 2018. All three, Sarah Eichhorn, director of TIDES, Karen S Browning, Professor in Molecular Biosciences and Erika Payan Zanetti, Assistant Director, Special Projects, International Office, responded very quick and positive. We agreed on me visiting Austin at the end of February.

In Austin I had a meeting with Sarah Eichhorn and TIDES Business Manager, Kris Powledge Gaddy. During this first meeting we discussed things that I could do at TIDES and also how to deal with the important DS-2019 paper work. I found them being very helpful and friendly. I then went to Karen S Browning's office to discuss my teaching. Karen was also very friendly and she gave me names and course schedules so that I could contact some teachers. During my 10 days stay I visited three different classes and had very fruitful discussions. I had the opportunity to visit two different meetings at TIDES as well. During this week, I got my own desk at TIDES and it felt nice to know where I was going to sit the coming Fall. During my visit I took some time to go around to see sites that could be nice to live in, my choice landed finally on Hyde Park. I also had some time to explore down town Austin.

During the spring I mostly dealt with my US VISA and I had some contact with the other Swedish STINT fellow going to Austin, Henrik Bogdan. I booked a nice place to stay, a little house in Hyde Park, through Air B&B. In May 22:th, I attended a STINT conference in Stockholm which offered me the opportunity to talk to other STINT fellows and I also met a very nice person, Ariel Trevis, from the international Office in Austin. I was also lucky enough to be able to visit the US Embassy in Stockholm at the same trip. In the summer I had several email contacts with Sarah Eichhorn and Karen Browning in order to try to figure out my teaching. I suggested that I could teach my own course in Horse Physiology, but unfortunately both Sarah and Karen told me it was difficult to administrate this. Even if I did not have very clear plans on what to teach I felt confident in that things would solve when arriving in Austin.

### Tasks and Responsibilities

One of my main tasks at CNS was to act as a co-teacher for a SIAD class, given by Professor Katie Hansen. Katie had a class of 150 students and she really needed help since 50 of them was in the science lab at the same time. My responsibility was to guide the students thru some microbiology technics and to walk around in the lab, giving them advise on how to do research. I also graded some of the student's research projects, both the middle term, and at the end of the course exams. In this way I had the opportunity to follow nearly 75 under graduated student during their first semester (so called freshmen) trying to do research.

The other task I had as a teacher was to co-teach in a FRI-class, Urban Ecology, also with freshmen. This class was ministered by two professors, one in Chemistry Dr. Ruth Shear and one in Biology, Dr. Stuart Reichler. Since there were two professors guiding this class, my responsibility was less than in the SIAD class. There were 48 students following this stream (they call the research classes for streams) mostly focusing on chemistry, which is not my subject. I, anyhow, got the responsibility to make a lesson, and I took the chance to try to get the students aware of the importance of having good arguments. This turned out to be an interesting experience. I followed this FRI stream closely, both at meetings, classes, Waller Creek samplings and labs, which was nice because in this way I got a very good view on how a FRI stream was administered and conducted.

The third task I was responsible for was to organize meetings with three professors, working halftime at TIDES as pedagogical recourses. Thereafter I was supposed to lead a workshop for other teachers at CNS. The theme for these meetings and the workshop was Critical Thinking - my own choice.

### Other activities During the Semester

I composed a weekly Blog for my colleague at home to read.

The first week of my stay I help out with a TIDES fellowship evaluation – The San Antonio Livestock Exposition. All students that applied for this fellowship was very competent so it was not an easy task to do this evaluation.

During my first week I also contacted Professor Jan Machart, this because I was curious on how UT at Austin professors handle the subject I am teaching at home, physiology. Jan teaches human system physiology and she was very friendly in inviting me to join her classes. I tried to visit as many lectures by Jan as I could during the semester. Since I was able to do this I got a very interesting and useful picture on how she deals with different, quite difficult questions in human physiology. I also noticed how she planned her 45 minutes, how she activated the students and I also got to talk to some of her graduated students about their thoughts of this kind of class. Jan is a perfect contact to have since she is a good friend of the author of one of the best student books on human physiology, Elaine Marieb.

I also went to other professor's lectures in order to see as much teaching as possible. Among these I visited Michel Starbird class called, Elements of effective thinking. I had a little chat with Michel and he gave me his book he had wrote on this topic. I visited Katherine Biberdorfs class, principles of Chemistry I. Katherine (Kate) had her class the day of Halloween for 500 students at the same time. I was astounded on how she was able to keep all of these students awake and active and I later learned that she is quite famous in US, see my video on youtube <https://youtu.be/zl1Y2A0WDsc> . I saw Mary Hines giving a lecture in histology for 300 students. I contacted Phillip Stanforth who teach kinesiology students and was able to follow one of his lectures. In Halmstad we give a three-year program that is in line with the kinesiology education here at Austin UT, so this was also a great opportunity.

During the whole Fall I attended two regular recurring meetings, the monthly TIDES meetings and the weekly SIAD meetings. It was nice to follow and to take part of these activities outside of teaching.

Except for the regular recurring meetings, I also had meetings with Lynda Gonzales. Lynda is responsible for international tasks at CNS, and we discussed several existing opportunities for a collaboration. This first meeting led to another meeting with Lynda, Sarah Eichhorn and Drew Hays, who is a nutritionist, and we discussed the start of an International Sprint, as a possible co-work. I had three meetings with Audrey Boklage in order to learn how TIDES help teachers in their teaching process. I learned how Audrey did her evaluations and I was allowed to watch a teacher together with her where after I got the notes on how the observed teacher did.

I had one meeting with Rebecca French, the Administrative Associate for the Student Services Department (SSD). I had this meeting because our student disability department will reorganize so I took the chance to interview Rebecca on how they do such things at UT at Austin. She gave us some very good advices. I had a meeting with Elizabet Ilardi, who helped us with a langue check on a manuscript written by me and a colleague. Finally, I also had three different meetings with persons working at the International office, including Erika Payan Zanetti, mostly discussing the STINT fellowship and how things worked out on our stay.

I attended different workshops, the FRI-stream workshop for students, a stress monitoring workshop for faculty, a workshop with the famous Sandra Tsing Loh, on how to do a research presentation easier to understand, and also an Improvisation workshop, where we were trained in how to be more spontaneous when presenting research. At the end of my stay I finally got a chance to go to: Hot science – cool talks. A quite famous professor Dr. Michael J. Ryan talked about animal's choice of beautifulness, I got his book and I also cuddled a bat. Finally, I also attended one of the University Canceled Gregory L Fennes talk to which I was invited.

During my whole stay I worked on my Master degree project. I am currently studying a program, Master program in pedagogics towards health, at Stockholm University. For the first two months I worked on my project plan and I had also to write a research application, and to attend two different online courses, for allowance to do my student interviews. My application was finally approved by the institutional revision Board (IRB), UT at Austin. So, in

November I interviewed 12 students about critical thinking, problem solving and creative thinking. I also meet their professor, Peter English, and had an interview with him about his course, Experimental physiology.

## Compare and Reflect on the Teaching Experience

### Teaching methods.

Since I got a chance to attend so many different and excellent teachers my “picture” will maybe contain some bias. From the student interviews I understood that there are many teachers here in Austin that “still” just repeat things from the book without activating the students during class. This is also what I have experienced from quite many teachers at home. So, in some ways Austin and Halmstad teaching method doesn’t differ, but...

I have seen a lot of good examples of teaching methods. The professors I saw that was teaching a class of several hundred students succeeded to activate them. The teachers often stopped talking after 5 to 10 minutes, at these stops they put out questions for the students. The students were also asked to cooperate with a friend before answering the question. Several teachers used a “clicker” which made it possible to show the result as vertical bars on how many students that answered a, b, c etc. My experience was that the teachers really made an effort to interact with the students thru out the whole lecture time. In Halmstad we often have lectures that go on for two or three hours, with 15 minutes brakes every hour, but here in Austin the longest lesson I attended was one hour and 15 minutes but most common seemed to be lectures 45 minutes long.

Since I was lucky enough to be able to follow two different courses with a lot of lab time I was also able to compare this kind of teaching. Both these courses used several teaching assistants (TA) and mentors. The teaching assistants were acting as a “mini-teacher” and the mentors were students that had taken the same class previous year so they could be a kind of support to the new students (freshmen). In both FRI and SIAD labs, the students were put in small groups of three or four. This groups were then supposed to do some research together with support from professors, TA: s and mentors. This was very interesting because, as far as I know, no University in Sweden will allow freshmen do research. In Halmstad we do not use former students to help out in a course as much as here in Austin. We do, anyhow, sometimes use Supplementary Instructions (SI), in some courses that we believe is difficult to follow for the students. SI leaders are former students that has been successful

in that particular course that will help beginners outside of class, but they are instructed not to act as a “mini-teacher”.

I also liked Dr. Ruth Shears way of grading the FRI-students writing their projects. Dr. Shear uses a rubric which starts with lower goals to reach and as the course proceeds' she raise the expectations she has on the students. She also notices each student's capability at the start of the course and adjust her expectation according to this. I have never heard about a teacher in Halmstad adjusting the expectations for each particular student, at least not at the university level.

One exceptional course that I experienced was Peter English, Experimental physiology. Peters teaching method is, in my opinion, outstanding when it comes to make students to think critically, creative and solve problems. This course consisted of only twelve students so I took the chance to interview them all and I will write my Master degree project as a case study on this course. I also visited Dr. English final exam in another biology course of his. For this exam he had the students to fill in a scantrone answering sheet on their own for the first two hours and then he let the students to discuss the same exam and to fill in a new scantrone sheet. All questions were multiple choice and of the grading's, 80 % depended on the first answers and 20 % on the group-discussed answers. I asked some of the students that handed in their sheets about this method and they all liked this kind of examination. The scantrone answering sheets is corrected by a machine in 2 minutes and it sends the results and grading directly to the professor and students. I believe this is true learning and good way of using teachers time. At home when I sit down for two days correcting exams, the student doesn't learn anything, I get very bored and end up with a bad back pain. I also have the experience that students that get 60 % or more and therefore will pass the exam do not read my corrections. One thing that surprised me in Austin was how extremely engaged and lively the quite old looking professors acted when entering the stage to lecture. I seldom see this enthusiasm at home.

### Teacher time

My experience was that the teachers here have more freedom in designing their own courses. The UT seems to trusts the professors and do not need to have the meticulous control of the service plan that is the case in Halmstad. To do a course you will get a certain amount of money to spend, in Halmstad you will be given some hours to spend on a course, all depending on how many students you have. A professor that is not a tenure has to do one or two

courses more than a tenured Professor, which is similar to Halmstad. A big difference is that here the teachers will be responsible for three courses as a whole, they don't have to do hours in five to ten different courses as in Halmstad. Austin use TA's for correcting exams and projects, so they do not have to spend days for this kind of work. All courses I experienced included office time, here the students are able to have a discussion with the professor, a thing we don't have in Halmstad. Even if it seems nicer to be a professor at UT at Austin than in Halmstad, the professors here seem to work a lot. Things like lunch breaks doesn't exist. Some of the professors I talked to also had another job besides teaching at UT.

### Grading

I have not been grading so many students and I did not have the responsibility for the final grading's and how to do with the credits. Anyhow, I learned that almost all teachers give credits along the course. A course here in Austin lasts for a whole semester, whereas in Halmstad we most often divide one semester in to two reading periods (läsperioder) with only one big assessment in the end of each period. In Austin they also have a more complicated system as you multiply credits with grading's, which we don't have in Halmstad. As a standard, student's grades range from A to F and each course gives 100 credits in total.

### Evaluations

At UT at Austin there is one big paper-based evaluation in the end of each semester. Some of the teachers I spoke to also ask their students about the course and how to improve during the ongoing course. In Austin the students are supposed to answer questions on how the professor managed. In Halmstad we send the students a web-based evaluation form after each course. This evaluation can be adjusted by the teacher so it fits the course better, but if the teacher doesn't care about this, the students will get exactly the same questions for different courses. In Halmstad we also try to put the questions so it will be about the course and not so much how the teacher is doing, directly opposite what they do in Austin. If you will succeed as a professor and to get a tenure position in US, you have to have good evaluations from the classes that you have been teaching.

### Students

The students at UT at Austin is mostly from Texas State. Students that belong to the 20 % best of their school will be invited to study at UT at Austin. All students are 18 years or older, and there were only a very few that seemed to



be much older. In Halmstad we often have some bit elderly students as well. There is a great variety of culture among the students, some are Asians, some are Afro-American or Caucasians, but most of them were from Texas with a Mexican-Spanish look. Quite many students seemed to be bilanguage. My experience is that the students in Austin are eager to learn but that they often postpone their reading till the end of the course, exactly like many of my students in Halmstad. As in Halmstad, they need help to organize their own learning. When asking the students at CNS, a very high percentage answered that they want to become medical doctors, so they have high goals. The students in Austin are very polite and will respect you. I really liked the way they hold the door open for the person entering just after. After one lecture I had a student came to me and thanked for the lesson.

## Important Lessons

Below is a list of some of the important lessons I made.

I have learned:

- That it is possible to active the students even in very large student groups
- That it is possible to do research with freshmen
- That it is possible to make a course so that it really challenges the students critical- and creative thinking
- That it is possible to make good assessment questions even if they are multiple choice questions
- That it is possible to free more time for real learning activities using smart ways correcting exams.
- How to make research easier to understand, for all kinds of listeners.
- That credits and grading's is a very big deal for students in Austin
- That it is possible to adjust the expectations for each particular freshman student since they have very different experiences and knowledge from earlier schools.
- That it is positive to be respectful for other people, including professor's..
- That it is possible to make teaching as important as research
- That it is OK to let the course contain a bit of chaos, that it is not bad but rather a good learning activity in some cases.
- That we should try to keep some academic freedom in the work of professors so that teaching continue to be an interesting, joyful and important skill.

I think that co-teaching was an excellent way of experience UT at Austin. This shared responsibility gave me time to go and see several other teaching activities. I had time to attend workshops and time to have discussions with a lot of other students, not just my own. I was also placed in the absolute right institution, TIDES, which offered me to have discussions about student learning. Since I was co-teaching I felt that most things were going smoothly. One thing that I could have done better was to, in an early stage, ask the professor of the SIAD class about my role as a teacher during my six-hour lab time. I was totally confused the first two lessons, mostly because I was not used to have TA's to help which made me unsure on what to do or say. After this second labs we sorted that out so there were no problem the following weeks.

## Action Plan

Thing that I will do coming back to Sweden and Halmstad University.

1. Since I am becoming the director of the Common Core (CC) Project at the university, I will have the power to influence the CC courses towards learning. I will make them adopt some of the concepts that I learned at UT at Austin by convincing arguments. In this I will use DR. English examples, Dr. Starbirds advice, several of the professor's ideas of making the students active by asking questions, which also is good in order to revile content understanding.
2. I will try to find some money so that I can invite Dr. English to Halmstad. I would love to let other faculty at Halmstad listen to his teaching story about how to make students think critically, creative and to become good problem solvers. Dr. English has announced that he is willing to come to Sweden for this purpose. I will also see if we can invite him as a visiting professor in Biology.
3. I will apparently also work some hours for HPC (Högskolepedagogiskt center) after coming back from Austin. Together with the director of HPC, Jeanette Sjögren, I will try to organize a project in order to collaborate with Audrey Boklage on teacher evaluations. We have already been talking about this but we have to write the idea down so that we can apply for money from Halmstad University. We will then invite Audre to come to Sweden, as one part of this project. Working at

HPC, I will also be a pedagogical resource for all teachers, working at Halmstad University.

4. Finally I will A) change my way of assessment for my course in microbiology, to adopt Peter's way of group assessment. B) I will start to make more questions to my students when I am lecturing. C) I will put in some kind of research questions in my labs. D) I will have the students to discuss different concepts, like what a solution is, a control group, etc. I want them to know what they really are talking about, to have the knowledge in depth. E) I will also start to think how I, in a better way, can make my students practice critical- and creative thinking. F) Depending on the courses I will teach, I will try to see if I can adjust my expectations on the students in an individually way, as Dr. Shear did.

## Summary and Conclusions

To summarize, I have to say that I loved my staying at UT at Austin! This is a very competent University both in research and teaching. I have experienced so much and I am now full of ideas and lust to adjust my teaching and to transfer my new ideas to my colleagues. I strongly recommend upcoming STINT fellows to try to co-teach at their university. This kind of teaching, with less responsibility, freed time for me so that I could experience a lot of other things happening at the University. I was constantly looking for new things to attend and my hosts, especially Sarah Eichhorn, helped me find some of the nice lectures I visited. So, keep looking for exciting events to attend. Some professors will not replay you emails but don't give up, ask somebody else. Be open and not judging, things are not always as they seem to be. I also recommend Texas. This state is a very proud state and I really love their proudness and their spirit. Everywhere I came, people waived and greeted. People are very friendly and Austin, even it is a big city, feels very safe. It is also possible go around by bicycle, so you do not need to buy a car.

Finally I want to thank STINT's organizers of the Teaching Sabbatical Fellowship for this great opportunity. I am also grateful to Halmstad University for letting me go abroad and for encourage me to apply for the STINT fellowship. I owe my hosts and all the professors and students I met at Texas University at Austin, CNS and TIDES, with Sarah Eichhorn in the lead, a very big "thank you"!



Me, and three of my TA friends in one of the labs.