

Das Jahr der Verkuerzung

An Introspective Review of a Life-Altering Year

My academic exchange at:

Technical University of Braunschweig

Braunschweig, Germany

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Introduction

In many ways, standing at the end of a year in Germany, I see it as a year of reductions. As you'll read in the body of this report, life as an exchange student can be radically different than life at his or her home university. I chose to land myself in the second largest city in Lower-Saxony, a city which has been named the "City of Science 2007" and is known for the wealth of Engineering and Scientific expertise that exists there. Braunschweig is home to approximately 240,000 people, including 13,000 University students. It is a colourful city, with a very exciting and long history, the seed of which stands tall in the middle of the town square: Heinrich der Loewe (Henry the Lion), who was a duke in the the middle ages who was responsible for developing the city into the major trading centre that it became. Practically every city in Europe has a much more impressively well documented history than the much younger cities that most north-americans are used to, but that's not what makes the exchange most exciting though. Read on for yourself to find the real reasons!

The Choice

How does one choose a destination when they decide to apply for admission to an academic exchange? As for most students, cost ranked very high on the list of deciding factors for me. The more constraining desire I had though, was the language. The fact that I had already decided on German as the language for my exchange obviously limited my choice to Switzerland, Austria or Germany. Inside the country of Germany, there are a number of exchange programs available. Furthermore, in comparison to Austria and Switzerland, Germany seemed like a much more appropriate option. For me, the fact that I knew of distant relatives who lived in the northern part of the country also played a role. Other advantages included the fact that in the Hannover area, the German spoken by locals is dialect-free, and is referred to as high german. Furthermore, I was aware that exchange programs, such as the OBW (Ontario, Baden-Wuerttemberg) program require students to pay home tuition fees. The main two contenders therefore in my decision were the Technical University of Hamburg-Harburg in Hamburg and the Technical University of Braunschweig, but I really didn't know what information to go on. I figured Hamburg is one of the largest cities in Germany, but it's also located very far north. I also noticed that Braunschweig is a smaller, lower-profile city.

Dangers I predicted to be associated with a large city like Hamburg were:

- a) too many distractions on the Reeperbahn
- b) spending too much time with other english speakers, and
- c) the fact that Hamburg is such a high-profile city.

Considering this, I started to lean towards Braunschweig instead, where there would be

- a) fewer people, and therefore fewer tourists,
- b) a smaller, but by no means inadequate social scene, and
- c) the originality of spending a year in a place that few know about.

It was actually quite daunting when I decided on Braunschweig, because I pictured it as a much smaller town, where I would be that much more out of place as a foreigner, but this is where the adventure factor came in for me. I tried to take as big of a leap of faith as I could. After all, what did I have to lose?

The Preparation

The exchange *year* is a funny concept, because you don't only have the buzz during your stay abroad, but you get to experience the excitement, anxiety and anticipation of preparing for it, normally for more than a year! From the time I chose to go, to the time I stepped on the plane in Toronto, 16 months flew by as I enthusiastically struggled to learn as much German as I could, periodically thinking: "What am I doing? Am I really going to leave everything I know and expect to succeed academically, socially, and financially for an entire year???" The thought brought a turning and twisting sensation to my stomach every time, but it was EXHILLURATING!

What did I have to help me believe in myself? Well, I had attended a German language school as a child, on Saturday mornings for a few years. As a matter of fact, I had already gotten credit for Gr. 10 German in high-school. So there was that and the fact that the worst thing that could happen would be that I could fail all of my courses and have to fall one year behind in my studies. Would that really have been such a big shame?

What I discovered while learning German: If one does not explicitly want to learn something, they will not be able to.

Proof #1: Elementary school student forced to attend German school early on Saturday mornings.

Attending German school for 3 hours per week without any interest in understanding what I was being taught didn't prove effective.

Proof #2: Student who has a large sum of money and a year of his degree riding on his ability to communicate in German while on exchange.

Maybe it was the fear of the consequences that would follow if I didn't learn enough, or maybe it was the excitement of having the chance to actually become fluent and to get the satisfaction of having Germans ask if I was German after starting to converse with me. Either way, one of these forms of

learning was much more effective than the other.

In order to prepare adequately, I took part in two further German courses, the first of which was GER201 in the Department of Germanic and Slavic Studies. Following that course I had my best language course experience when I took the 4th level language course at the Goethe Institute in Toronto. I think that the reason why it was so effective for an intermediate level where the pupils are still trying to figure out the grammar was that my teacher was not a native speaker. This meant that she had learned the language just as we were attempting to do, meaning that unlike the common native speaker, she knew and well understood the actual rules of the language. Paramount to that fact however, the course was filled with people of all ages who were self-motivated to learn the language, instead of those who simply needed it in order to fulfill their degree requirements.

As a part of the application process, the preparation of a detailed study proposal was required so that the officials at UW could be assured that the project would be carried out with success and would not lead to a delay of studies upon return from the host country. At that time, I made choices for not only which courses I would take in Germany, but also the courses that I would take upon my return in the 4B term. The most exciting of the preparation activities however was booking the flight on a one-way ticket.

The Preamble

Thinking ahead, I planned to fly on the 12th of September from Pearson International to Charles de Gaulle in Paris. My intensive language course was not scheduled to start until a week after that, in Braunschweig, so I planned to get the travelling under way right away, with a few days in Paris and then a leisurely trip on the train from there across to Germany. The plan seemed great to me: I would finish my 3A exams towards the end of August and then have three weeks to get myself ready to go. What I forgot to take into account, was that in addition to all of the packing, and fine planning that had to be done I also had to find time to say goodbye to all of those who I would miss dearly during my year away.

Well, I obviously ended up catching my flight and got to Paris without trouble. That's when life began to live itself like a dream. I found myself immersed in french. My french isn't good, but I was surprised by how much of it quickly came to my tongue when I needed to say something.

My stay in Paris turned into a week, and ended up costing a lot of money, but I had to take the opportunity when I had it. I had met two really cool Australian travelers at my hostel, who coincidentally had also just arrived and also had about 5 days of Paris planned into their schedule. We

ended up spending those days together, and managed to do all of the normal Paris tourism points, as well as a few of our own creative ones.

The Language

One thing I'll never forget about this journey was how weird it was after being in France for a week, to sit in a french train on the way to Germany and have the feeling as though I was on my way home. I'm not quite sure what it was, but I was really excited to get back to the comfort of being in Germany (ironically, a place where I had never been before), a place where I would be able to communicate much more effectively than in France. Maybe it was just the fact that I had been preparing my skills in German so dilligently in the months leading up to that, that I was anxious to get a chance to finally use them. Sure enough, when I arrived and I had to use my language, I was much less timid about speaking. My trip from Paris to Braunschweig involved an overnight stay in Koeln, and another one in Hannover. I felt that I had to do it this way, because I was not scheduled to move into my residence room until Monday morning, and I left Paris on the Saturday morning before that. I remember asking the gentleman at the front desk at the hotel in Koeln about the WLAN that was advertised on the sign out front and having to explain to him what it was, either because he didn't know anything about it, or because I was saying it wrong.

To those of you reading this who question whether it is worth learning German, I'll say that it is very rewarding. I say that not only because it is so challenging, but also because there is a lot of need for technical translation services. In order to do translation of technical papers (something that Germany publishes a lot of, as a major export country) one has to know about the topic that they are translating, so when the professor finds a native english speaker that is fluent in german as a second language and has studied engineering, they can't wait to have you either translate their german documents, or even just to have you to take the second-language qualities out of a work that was already written in english. Paramount to the accomplishment of having learned a complicated language and the fact that you by that point probably have a job in the ever-so-lucrative translation business, the German language is technically beautiful. If you know how to use it properly, one can formulate thoughts much more effectively than they can in english, just because of the extra cases, the genders, and the declining articles. One warning, however: It might turn you into a language geek.

The University

I always felt proud to be a Canadian on exchange in Germany, and because of that I always took

chances to introduce myself to the professors, and grad students who were supporting the lectures. The item that I find most noteworthy about my experience at the University is that studying in Germany is quite different from studying in North America. In Germany, I found that the courses were much more self-motivated and in fact a student's success often depended only on their performance on the final exam. The courses I was taking while abroad were part of the Diplom and no longer the "Undergraduate" portion of the degree and because of this I noticed that the students with whom I was studying made very effective use of all sorts of resources, such as graduate students who were working in the various departments, as well as library books and online journals. I got the impression that in that system the onus of success was appropriately placed on the students. Though the professors were also generally glad to offer time in order to help the students to understand the concepts it was much more up to the student to find other ways of getting access to the knowledge that they needed.

Another difference between our two systems is that in Germany, the professors themselves are much more highly regarded. There is actually a discrepancy between the title "Professor" in Germany, and in North America. At German Universities, the research is done in various groups called institutes, which are organized very much like small companies. Even though any of the doctors in any of the institutes may be the one responsible for giving lectures, only the director of the institute is called the Professor. Furthermore, these Professor figures are highly revered because they have gotten special qualifications and in many cases have completed two doctoral theses before being hired as a director. Naturally they are often very busy people and their title comes with an almost second-to-none level of prestige.

The Life

Through the Braunschweig exchange program, accommodations were arranged through the cooperation of Dr. Krull and Dr. Schuster. Anne-marie (the other Canadian) and I stayed in a residence called Michaelishof. Despite the fact that my arrival in Braunschweig was the most intimidating part of the whole experience, I couldn't believe my eyes when I arrived at the residence: "It looks just like a Cuckoo clock!" I'm pretty sure it's not that the landlord doesn't *know* a word of english, it's just that he doesn't *speak* a word of english. Under the grouchy facade though, Herr Littau is a really nice guy. The second-most intimidating time of your stay will be when you sign out of your residence room and attempt to get him to sign your forms so that you can get your rent-deposit back, but that's a long way away, so don't worry about it too much – just remember: "Richtig sauber machen!".

During my stay I took the chance to get involved with the MichaelisNet Network Club. This is an official student union club that is responsible for building and maintaining the network that exists in the Michaelishof residence. At the time, they were looking for somebody to work on starting a new website

for them, and they wanted to implement a CMS for that, so I decided to take on part of that challenge. The MichaelisNet guys were a lot of fun, and they were really willing to be patient with me when I tried to articulate things in their language.

In my opinion, the success of an exchange term is determined by your ability to completely let yourself go and to let yourself mould to fit the surroundings you are in. If you can forget who you are for the time being and let yourself be transformed by your surroundings you will come out with a much greater appreciation for the results. The people who enjoy their years the most were the ones who made lots of their own new friends and tried the most new things during their exchange, whereas the ones who have a mediocre impression of their year are the ones who for whatever reason held back and didn't take the risks necessary in order to experience the most new material that they could.

The Engineering

The technical university of Braunschweig is well known for its mechanical engineering program. When you arrive on the campus you'll notice this. When you get to your lectures in Electrical Engineering, you will experience it. The Electrical Engineering department is much smaller than what we are used to here at the University of Waterloo but I saw that as a great advantage. The small class sizes allow you naturally to take advantage of easy access to academic resources. Furthermore, due to the small number of students, institutes are able to offer lab courses in which students get to deal with leading-edge equipment. In the Institute for Semiconductor Technology I completed the Electronic Technology II lab in which we fabricated a real integrated circuit on silicon. During the course that corresponded with that lab we made a field trip to visit the local Toshiba packaging facility. In the Electric Machines lab, in addition to covering standard rotating machines like DC, synchronous and asynchronous motors, we completed labs dealing with a linear motor and the power electronics that drive it as well as superconductor light-rail concepts. Two areas that definitely do not find place in any of the Waterloo ECE undergraduate labs.

The Exams

Exams are definitely a large part of the academic exchange experience. As explained before, 100% of your mark for most courses is earned during the exam. In the case of a written exam, you have 3 hours to prove your worthiness of a passing grade in a course and in the case of an oral exam you have 30 minutes or less. The real reason, however why exams are a large part of the academic exchange experience is that the exam time is 3 months in length. Not only does this leave you plenty of time to

study up for your exams, but if you're lucky enough to have a couple of weeks left over at the end of the lecture-free time as they call it in German, you can probably make it as far as Morocco or Latvia.

Back to the exam part of this section for a little bit: I found that the exams in Germany were much more difficult to succeed in. In retrospect, I must say that there are definitely advantages to both systems. In the system here in Canada, where we write all of our final exams in the span of no more than two weeks, we don't spend 3 months studying. That is optimal in my opinion. In Germany, however the time during the lectures is much more enjoyable. When it gets to exam time, however students spend literally weeks at a time in the library every day learning the content of their courses.

The Fourth Year Design Project

One factor that I believe plays a large role in limiting the number of ECE students who participate in exchange programs is the 4th year design project. As you probably well know, if you are proposing an exchange program, you're almost for sure going to somehow disrupt participation in your 4th year design project. You can't go away on exchange normally before your 2B term is complete, and it's not really logical to go during 3A, so you're generally going to miss at least 3B, and if you spend a year (something I wholeheartedly recommend) you're going to miss 4A as well. What you'll have to do during the months leading up to your exchange, is set up a team and have them agree to work with you on the project while you are away.

Here is what my group did:

We formed our group during the 3A term, and already began brainstorming as to what we were going to design and build. This was very advantageous because we were able to predict how the group would work together in order to complete the various tasks that would follow in the next year. With the use of modern software such as Skype and Track Changes we were able to collaborate quite effectively throughout the year and ended up achieving remarkable results with our project. Keep in mind, because of the time-change, you can get 6 hours of work done before your team mates over in Canada even wake up!

The Holidays

I'm not sure that I labeled this section of the report properly. Under "holidays", most people understand relaxation and tranquility or "lounging around". Travelling, on the other hand is a little bit different. I took "holidays" a few times throughout the year, such as when I chose to forego the opportunity to travel back to Canada for Christmas and instead spent two weeks with a classmate who was on

exchange in Lausanne, Switzerland travelling around central Europe. During my travels around Europe I visited 17 different countries and collected countless unforgettable stories along the way.

One resource that I made use of during travels was www.couchsurfing.com. This is a website on which you can meet people online who will allow you to bunk with them at their place while travelling in their city. It works quite well and allows you to get to know the real life of someone who is native to the area in which you are travelling. While travelling in Europe be sure not to miss the many short-trips that you can make while staying in Germany. From Braunschweig you can easily get to many big cities like Berlin, Hamburg, and Bremen, but also to smaller places like Wolfsburg, Goslar, Bad Harzburg, and Brocken, the peak of the Harz mountain range.

Another special experience that I got was to visit a cottage club's cottage (possibly the only place where I actually took holidays in the true sense of the word). The idea might seem a little bit foreign to you, but the way one person explained it to me is that Germans don't have enough room for each of them to have a house AND a cottage, so they have cottage clubs where 100 or more people might share a cottage. There's generally a board of directors, and members schedule the time they would like to spend there. Those weekends were exceptionally fun because every time we went there were different new people there to meet.

Conclusion

In conclusion, I challenge you to take the plunge. Your experience will not be the same as mine, but it will be most rewarding if you open up your mind to as many new things as you can. Below, I have summarized some of the risks that you'll take by going on exchange to Germany. Ironically, they all seem to be gainful experiences. Good luck with the preparation, and enjoy your year abroad!

Risks to be taken: (Watch out. You will experience some or all of the following.)

Fluency in German

1 year of sustained travel through Europe

International networking

Excellent education

An old yet exciting culture

Uninterrupted progress on University of Waterloo degree program

Development of a brand new perspective on life