University of St Andrews

LAIDLAW SCHOLARS

Leadership Essay

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Introduction

A leader is someone who constantly pushes to better themselves and improve the things that they are passionate about; in doing so they inspire other people to follow suit. Leadership is about the pursuit of competence, passion, change, and sociability, but not authority (although this can often be a result of this pursuit). This is the interpretation of leadership that resonates with me, and the Laidlaw programme has inspired me to reflect on my character, my views, and my priorities in life. In this essay I will discuss my experience with the programme and go into detail about my own development.

Overview

The Laidlaw scholarship is a two-year programme that consists of one summer of research and another summer where you do a leadership project. My only intention for applying to the programme was to do the research project. Nevertheless I have now found that it is the leadership project that has the biggest impact on me. Two years ago, I was certain that I would do a PhD after my bachelor's, stay in academia, and eventually become a lecturer. Even though I have been able to do two good pieces of research during my time at university, first with Laidlaw, and then another one funded by the Royal Astronomical Society, I found that I enjoy building things more. I am no longer certain about the career path I drew for myself two years ago, but I do know that I want to pursue a job in the clean energy. This too shows influence from the Laidlaw programme. I have come to appreciate sustainable development and working on projects for the "betterment" of society, even if the impacts of my personal efforts may be small. The programme helped me understand that I am not a bystander but an active participant in the shaping of society.

During my first summer, I researched the combined ice-ocean dynamics of Jupiter's moons, and in my second summer, I worked at the European Organisation for Nuclear Research (CERN) to develop a programme that will help high school students from around the world learn physics. In addition to the summer projects, the Laidlaw programme hosted a variety of leadership events where I was able to meet and talk to other Laidlaw scholars, and I believe that this is a big reason why the programme is as good as it is. The other scholars I met through Laidlaw have had vastly different upbringings from me. Some had travelled around the world, and many had experienced much more than me. The conclusion that I came to was that I had a lot of catching up to do. This may be imposter syndrome, but I also think it's the truth. I had good academics but that was about all the qualifications I had. Many in my cohort had what I had, but also hard experience with leadership and initiative. This was not a bad thing and while it was overwhelming, it gave me motivation to work hard. I also found it inspiring to see how other scholars in my cohort changed and grew during their two years, which also fuelled my personal growth.

The leadership events covered much, from self-leadership to the leadership of other people. Even if I do not care for managing other people, and only want to pursue the causes that I care about, I may eventually end up needing to manage other people, and the programme has taught me what it means to lead others effectively. Once I was able to disconnect the idea of leadership from the job of managing people, and understood the concept as a skill set that manifests in many contexts, I began to see leaders everywhere. From my friends, to extended family, there were many people that I was able to look up to and be inspired by.

Research Project

I look back at my first research experience very fondly. For the first time ever, I was the only person who could answer valuable questions in a niche using results from my own work. The process was by no means easy and I made many mistakes, but I understood what it means to apply the scientific method to real world problems, make theories, disprove them, do the whole thing over again, and refine my understanding with each iteration. Even before I could start reviewing material for my project, I had to self-learn fluid mechanics. As a second year student, I found this challenging because I did not have the mathematic maturity to fully appreciate the framework behind fluid dynamics. Nevertheless, I was able to get to a point where I could conceptualise the postulates and equations and see how it relates to the simulation that we were working with. When I came across research problems that I could not fix, I asked my supervisor for help, and the way that she solved the problems efficiently helped me understand what I needed to aim for in the future. After all my work was done, I produced a 30-page research report using LaTeX (which is an industry standard technology for documentation; this is another thing I learnt to use better). A few months later, in the November research showcase, I was able to present my research in a poster session to an open audience which helped me hone my communication skills. From one of the Laidlaw leadership events, I was told that I should be able to describe my research to anyone in under 20 words, 2 minutes and 5 minutes. This is a principle that I still follow today with many things even beyond research. Being able to explain things concisely and compellingly is a valuable skill that I am still working on. The combination of skills that I developed during my first summer translated into an overall increased confidence in my ability to conduct research.

The experience I gained during my Laidlaw research project has already paid off at my new research posting. I started this work after my second summer's leadership-in-action project, where I am working with researchers at the Institute of Cosmology and Gravitation to help find the true age of the universe by analysing stars in our galaxy. The research is based on concepts in astrophysics, which is a subject that I have not directly studied at university (much like fluid dynamics with Laidlaw). There were other students who applied for this project with formal education in astrophysics, but the fact that I had prior research experience in an unfamiliar topic gave me the edge to be selected. We are preparing to publish our findings by the end of the year, and I will take part in the write-up since I have worked with LaTeX in my Laidlaw research project.

Leadership Project

CERN is an organisation at the very forefront of physics research. It houses the largest particle accelerator in the world, the LHC, which collides particles at near light speeds to better understand our universe. It is also the place where the world wide web was invented; this is the framework that the internet is based on. In my second summer, I was able to propose a project to this organisation and work with the communications team to bring it to life – an experience which has had the biggest impact on me during my time with Laidlaw. I have obtained four figure investment for my project at CERN, and we recently partnered with an external private company called FameLab to use their resources for promotion and marketing. Considering that I was not expecting any financial investment at all, I am quite happy with this outcome.

Since I was doing a self-defined Leadership-in-Action (LiA) project, my application had to go through a

higher level of scrutiny than if it was pre-defined. My final proposal was vastly superior to the one I started with due to multiple rejections from the Laidlaw team (even before I pitched it to CERN). They were tough, but they pushed me to completely reshape my project which I am grateful for. They did not design my project for me, but they did give feedback on the parts of my proposal which did not make sense, logistically or when considering the rules for an LiA project. Being able to tackle such a proposal in the future is a valuable skill that I have gained. Furthermore, one section of the LiA application asked me to break down my proposal into very detailed "actionable steps". I have found that this critical breakdown of tasks to be a very useful practice that I now use in my life outside Laidlaw. It makes daunting problems seem simpler, and makes sure that I have a deep understanding of what needs to be done, before I do it. Once Laidlaw gave the green light to my proposal, I pitched it to Daniela Antonio, the director of digital communications at CERN. Interestingly my LiA had a safety net as even if she did not agree to move forward with my proposal, I was still able to work at CERN, but to my honest surprise she really liked my proposal. The experience I gained through this proposal stage is as valuable to me as the time I spent actually bringing my project to life. Through this, I also learnt that rhetoric is key. You can have a good idea but what you are passionate about may not be something that other people care for, so it is up to you to genuinely frame it in a compelling manner.

Being able to work at CERN was fantastic as I was finally working at the place that I had dreamed about for years. I was surrounded by incredibly smart people working with physics at incomprehensible scales, speeds, and energies. My love for the subject was rekindled and I was determined to make a positive impact on this organisation. Nevertheless, I found my work to be hard, and I made an incredible amount of mistakes along the way (none of which I regret, as they presented opportunities to learn). All the while, I wrestled with the idea that there were so many people that could do what I was doing so much better than me. Through my time here, I learnt about the way that an international organisation like CERN runs. For example, my supervisor said that CERN effectively has a flat organisational structure and every project that happened heavily relied on personal relationships of people between different departments. I learnt to take feedback and criticism gracefully and above all, I learnt to be methodical in my work. Although my six weeks of my LiA have passed, I am still working with CERN. We are preparing for a public release of my project later this year.

The CERN campus is located not too far from the beautiful city of Geneva, on the French-Swiss border. My time here was my first experience in continental Europe by myself. When I was not working, I was able to travel around the city, drive a boat across the crystal clear waters of Lake Geneva, and hike across French mountains. I am truly grateful for the Laidlaw programme for giving me the opportunity to experience all these things. Even though these experiences are less linked to leadership, being independently well travelled is essential in building confidence to be a leader. I also met some fantastic people during my time at CERN, some of whom I still keep up with. An engineer at CERN who is helping with my project mentioned that he would like to donate a significant amount of computers, and that he had previously done so to universities in Sri Lanka. He gave me the contact details of the person he dealt with before and I am planning on helping coordinate this donation.

Final Thoughts

The Laidlaw programme has been an integral part of my university experience and has catalysed my personal growth to an extent that I find hard to emphasise. Through my summer experiences I have gained confidence in both research and designing projects that I am passionate about. The leadership training has been essential for me to better understand myself, my weaknesses, my strengths and with this, to better apply myself to the situations I come across. I look back my time at university and find that my development is inseparably intertwined to this programme. With this in mind, I invite future Laidlaw scholars to contact me at any time to ask about my experiences or the programme. I am especially open to talking to scholars interested in working at CERN who would like to obtain contacts of key people in the organisation.

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