

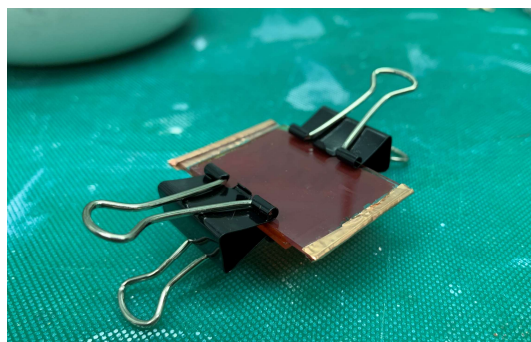
Introduction

Over the last eighteen months, I have seen myself develop and grow significantly in both a personal and professional sense, and much of this development is through the opportunities and opened doors that the Laidlaw Scholarship has been able to provide. I want to make a distinction now, however, between the existence of the opportunities and the act of seizing those opportunities.

The components of the Laidlaw programme have accelerated my development, but it would be inaccurate to ascribe the entirety of the change to these chances themselves. I had to navigate unfamiliar concepts to grow, and I found that the events that had the most impact were the events where I explored leadership actively with optimism and an open mind. Had I taken a different approach to our workshops, to my research and to working in Colombia, I may have only reinforced my own beliefs and failed to recognise the utility of the different perspectives that surrounded me.

Application

It was November 2022 when I came up with the concept for my summer research at the end of the academic year. One of our experiments in the teaching laboratories was to produce a working solar cell using extracts from fruits containing anthocyanins, a class of organic dye molecule. The design suffers from several issues including low efficiency and lack of understanding around how the anthocyanin chemistry changes when they interact with different metals. I approached the coordinator of the experiment to ask about possible research opportunities over the summer and we worked out possible avenues to explore with the equipment we had available.



An example solar cell produced in the laboratory

However, even with this project plan and a willing supervisor, I was missing one critical part: funding. My application to the Laidlaw Scholarship was motivated by a need to find a way to pay for living at university while conducting my research and with a generous stipend, it seemed perfect, not least because I would know the outcome of my application far faster than many of the other sources I found. After completing an application and two interviews, I was delighted to hear that I'd been selected for the programme, though still a little sceptical of what the leadership development might bring.

Meeting the Scholars

Our first event was a residential experience at Hospitalfields, spending two days in topics of leadership and self-leadership to prepare for our upcoming summer of research. One of the topics we discussed during the weekend was the idea of defining different leadership styles to reflect the variety of attitudes that we showed as a group. The DiSC approach splits leaders according to where they sit on two parameters: focusing on the task or the people; and whether their decisions are split-second or take more time. My own leadership style focuses on the people involved and I tend to lie in the middle with respect to decisions; this leadership style is good at keeping teams engaged and ensuring morale is kept high but one of the potential weaknesses is that I can become absorbed into a task at the cost of a broader view of the project.

This weekend also began one of the most valuable components of the scholarship: the development of friendships with those going through the experience with you, from whom you can learn as much as you teach. Throughout the experience, being surrounded by other Scholars has given me a space to reflect on our progress, analyse the concepts we learn or observe in leadership and to build a culture of accountability.

A Summer of Research

I was relatively confident going into the first summer of my aims both for the six weeks of work and for my path in the future. This plan was upended in the first week in which the reality of research kicked in and I was buried in literature working out why my experiments were failing rather than working in the lab.

One of the other lessons of the programme was the important of a community to work within when failure inevitably arises in a research project. My DiSC profile came to life in the solitary laboratory environment and I found that dealing with the problems that were coming up was so much easier when someone else was there to listen, even if they weren't a chemist. In groups of Scholars, we also took the time to share our frustrations, from supervisor absence to the long lists of literature yet to be read, and this sense of common problems gave me reassurance in my work.

Throughout the six weeks, the programme included different talks from academics in the university. One of the talks that resonated with me discussed the importance of storytelling both in research and in broader contexts. Telling a story means that the audience is taken on a journey; without an audience, constructing a story means that your own knowledge of the topic is brought together, made more coherent, and this has its benefits also. Even now, writing this essay, I find myself asking which story I want to tell through my words.

Leading From Afar

From August 2023, I was working away from St Andrews with a chemical company to learn more about the industrial applications of my degree. My interaction with the scholarship was at this point entirely remote and brought with it a unique mixture of benefits and drawbacks. An industrial context brings with it a corporate hierarchy to navigate and placement students tend to sit close to the bottom, so one of the skills that was critical to learn is how to develop and leverage informal authority.

Another immediate benefit was the chance to try to implement my reflections from the summer research into another project, one of which was to split my day into two distinct sections: one for laboratory work and one for literature reading. This plan was disrupted in the initial weeks by training sessions and meetings, but another problem presented itself: the nature of the experiments meant that instead of a constant workload, the demands varied between days and weeks.

The near-immediate feedback gave rise to an iterative process in which I tried to balance my reflections and goals with the reality of my work, but it brought with it a realisation: leadership is a learning process, both in its development and in its practice. Adaptability is often quoted as an essential skill for leadership, but this is contingent on leaders having the necessary skills and carries the implication that leaders can solve any problem by finding new applications of skills. This might generally hold true for 'soft skills' such as conflict management or communication, but 'hard skills' can be situation-specific and unlikely to have been learnt elsewhere. Every time that I need to practise leadership, I learn more about my skills and the those of the people that I lead, and so the cycle continues. Adaptability is critical to applying learnings to a broad range of situations but if the initial learning stage is missing, the number of learnings to apply is smaller and the effectiveness of a leader is greatly reduced.

The obvious drawback to remote development is that I lost the collaboration of group events that disappears when working far away from the university. I found that reflection and research on leadership theories was only so useful as a foundation, but learning and growing on this is materially more difficult. In discussions with other Scholars within the cohort, we discovered that our collective opinions can be strongly-aligned on some concepts and widely varying on others. For instance, the principles of the Learning Service Approach were generally accepted, but we found differences when thinking about how we might practically implement those into our work for the Leadership in Action.

Sustainability In Action: make_sense Colombia

With all of these experiences to guide me, I leapt into the Leadership In Action in collaboration with make_sense americas in Medellín, Colombia. Our project focused on delivering a series of workshops to children in Picacho con Futuro, a community organisation that wanted to use our knowledge of sustainability and circular economy to bring those concepts closer to home. I worked with Otilia Rose-Marie Meden (University of St Andrews) and Rachel Yue (University of Hong Kong) to deliver a series of workshops focused on first elucidating what sustainability meant to the children in Medellín, then delivering those workshops around those themes. We settled on the importance of nature, water, and recycling, finishing our workshops with a field trip to the Museo Del Agua and a construction challenge using recycled materials. I learned immeasurably from the experience, but the primary learnings I take forward are design thinking, flexible communication and my improvement in conflict management.

The main concept behind make_sense projects is design thinking, a human-centred iterative process that consists of five stages: empathise, define, ideate, prototype and evaluate. Since our project involved several different prototype workshops, we were able to repeat the cycle and improve our outputs using design thinking throughout the project. However, we found it applicable to leadership, brainstorming new ideas to then put into practice in our workshops and refine over the six weeks.

Communication is a difficult skill to master in your native language, but to do it while also learning Spanish was a different challenge for me entirely. Not knowing the correct words for something meant trying to find something close or describing it in other words, which often creates confusion. Coupled with this was a need to speak to different groups of people who required different explanations; the children taking part in the activities rarely needed the same details that the volunteers at Picacho con Futuro needed, or the details we gave to the external volunteers. Adjusting my words to each individual group was great practise in hindsight, but at the time created more headaches. What it also taught me was that people process languages differently, and my making an effort to communicate in their language was greeted with an enthusiasm that never would've arisen from simply using the translation on my phone.

One of the areas that I wanted to develop in this scholarship is my ability to generate and manage constructive conflict, but primarily working alone in the first summer meant that conflicts were usually rare and the benefits to ideation that it can bring were absent. In this collaborative environment, I learned that conflicts are far more common and that its impact on teamwork is significantly dependent on how the conflicts are resolved. When conflicts are poorly resolved, unnecessarily framing the issues as opposite sides, members of the team feel underappreciated or unheard, becoming unwilling to contribute in future. In a constructive approach, however, I consider conflict like a meeting of two rivers, recognising that both are trying to achieve similar goals but that the direction will need to adjust to account. In this way, I was also able to identify the priorities of different members of the team and this awareness allowed me to better understand the motivations that led them to propose certain ideas over others and therefore better mediate disagreements in the path forward.

Conclusion

My perspective entering this scholarship was one that saw leadership development workshops as a necessary cost to funding a summer of research. Graduating the programme, I now see that the greatest benefit has been the people that I have had the privilege of meeting, from the scholars of St Andrews University to the volunteers working tirelessly at Picacho con Futuro. Leadership is not a series of one-off workshops, but an active and continuous learning process, one that often requires reflection with others to take steps along the path. The ability to engage in critical reflection on how I have changed as an individual is a difficult challenge, but the most important lesson to have taken away. It seems apt to say that the majority of my photos of Medellín are of people, not of places.

My time with the Laidlaw Scholarship Programme is now coming to an end, but I will take the lessons learnt into the future as I continue to practise my leadership. I look forward to implementing my learnings from *make_sense* as the School President of Chemistry this year leading a team of academic volunteers and to apply my research experience from the programme to my final undergraduate project knowing that I have a network to support me when I face challenges. I may not be sure what follows, but being able to self-manage, build a community with others and reflect both on project success and my own growth will allow me to flourish in whichever field of work I find myself in.

Acknowledgements

*I would like to thank Lord Laidlaw and the Laidlaw Foundation for their scholarship, without which none of these experiences would have been possible. I would also like to thank the St Andrews Laidlaw team for their support and patience; the Scholars I have had the fortune to connect with in St Andrews, Colombia and beyond; and to Daniela Garavito, for her time and kindness in our six weeks of *make_sense* experience.*