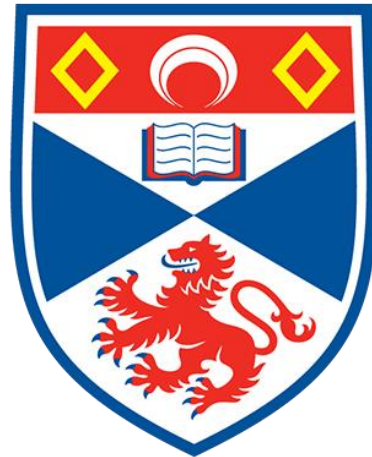


Reflection on My Leadership Development as a Laidlaw Scholar



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Reflections on my Laidlaw Leadership Journey

As I sit in my room in St Andrews, about to enter my final year at university, I feel a sense of pride in how I have developed throughout the last 2 years as a Laidlaw Research & Leadership Scholar. When I applied to be a Laidlaw scholar in 2023, I was slightly unsure on what skills the programme would provide me with. After getting accepted into the programme, I was introduced to my fellow scholars at our first leadership event at Hospitalfield in Arbroath, which was both nerve-wracking and exciting. There, I discovered my leadership profile through DISC Flow Profiling, showing that I had a High Steadiness leadership style. It was definitely interesting and insightful to learn about my leadership style through this method of profiling, although I didn't agree with some of the limitations it said that I had! We also made goals for my leadership programme, and some of my goals included being more confident in presenting, and becoming more adaptable when in new environments. I kept these goals in mind when heading into my summer research project.

Summer I: Research Project

In the summer of 2024, I completed a 6 week research project titled "*The Impact of Ocean Acidification on the Role of Lipids in Coral Biomineralisation*", supervised by Dr Nicola Allison at the Scottish Oceans Institute on East Sands in St Andrews. This was a completely new area of Chemistry that I was involved with: Ocean Chemistry. I also felt that this project was much more interdisciplinary than some of scholar's projects, which was a little daunting, but I fully embraced it. Having done a unit of my Inorganic Chemistry module that year on the impact of ocean acidification has on coral skeletons, I was instantly drawn to this project, having found myself interested in coral reefs during the subject. Additionally, the project provided me with an opportunity to make a contribution towards solving the problem of ocean acidification's impact on coral skeletons. However, during my first week, I realised that there was a lot to learn about this topic. Dr Allison really provided a lot of help to me at the start of my project, having found it a little challenging when starting. During the project, I started to gain more independence in the lab, working for several hours on my own. I was tasked with precipitating the mineral aragonite, also known as calcium carbonate, under seawater conditions. Aragonite is the mineral skeleton within a coral, and is the backbone of

coral. Under ocean acidification, the precipitation rate (rate of growth) of aragonite slows down, and I looked at the impact of two fatty acids, Palmitic Acid, and Phosphatidylcholine, on the precipitation rate. We found that at higher concentrations of Palmitic Acid, the precipitation rate actually increased, which was extremely interesting, and had to be looked at in further detail to examine whether this could have benefits to counter the slowing aragonite precipitation rate.

Some skills that I gained during this research project included being able to work independently and practical laboratory skills. However, the biggest learning curve that I got from the project was that mistakes are meant to be made, and that there is no need to dwell on them. I feel that I have taken that skill on forward in life, and generally move on from any mistakes that I make.

During the 6 weeks in St Andrews, we also undertook Action Learning Sets with 4 other Laidlaw scholars from St Andrews. I found these meetings very insightful, as it was a way to talk to other people who aren't involved in my project, and also to vent any problems that I was having with my project. They were able to provide different points of views on my problems, which helped me very much. It showed me that team meetings are very important, as people from different areas can provide different perspectives on issues. I felt that my collaboration skills improved with this task.

Summer II: Leadership-in-Action Project

After spending my first summer researching coral and its mineral skeleton, I became very interested in coral reefs. In fact, during the project, I read the book "*Reef Life*" by Professor Callum Roberts, who is a marine conservation biologist and has worked in marine conservation for over 30 years. The book was about his life as a marine biologist, including when he first dived down to visit a coral reef, and he wrote in great detail about the experience, and how life at the reef is so vibrant and otherworldly. The incredible descriptions of the reef inspired me to write a creative piece for the University of Melbourne's Science Magazine when I was there on my Study Abroad. However, the part that struck me the most was how coral reefs around the world have declined in health, and how much danger reefs are in, from overfishing, ocean acidification and

unsustainable tourism. It made me want to make a change locally, and so for my Leadership-in-Action project, I decided that I wanted to work with a marine conservation NGO, driving local change. In my pursuit of NGOs, I found one based in Zanzibar, an island off of mainland Tanzania in East Africa. Under the Wave Organisation (UTW) is a marine conservation organisation founded in 2020. I was drawn to UTW for their coral restoration program, and I was lucky enough to be accepted as their Coral Intern for 7 weeks.

This internship was one of the most rewarding experiences in my life thus far. It helped me achieve my goals that I had set at the start of my Laidlaw Programme, especially becoming more adaptable when in new environments. I had never been to any country in Africa before this internship, so I wasn't entirely sure on what to expect. I did have a culture shock at the start of my project, such as my closest supermarket being about an hour away by foot and then by Dala-Dala. However, as the weeks went by, I became a better food shop planner as I knew it would be another long journey back if I had forgotten anything! I found this internship so interesting, as at the time, UTW was a small NGO that was in the process of scaling up quickly. It was fascinating to hear from my colleagues at our bi-weekly team meetings what projects they were working on. This included a dolphin tourism plan, sustainable fisheries, alternative methods of fishing, the coral restoration program and their marine education program. During the 7 weeks, I was a part of different activities, including the dolphin behaviour monitoring, helping to run the school lessons and accompanying field trips. I'd also gained a well-rounded knowledge on different fish species found at the lagoon, and how to identify them. But, I wouldn't call myself a fish expert yet, with there being hundred of different species of fish! By the end of my internship, I also led safety briefings to volunteers and also led mini-presentations on how our data on dolphins' behaviour is collected what our data represents, improving my presenting skills. I also got involved in the social media communications of the NGO, posting reels and content to promote what the NGO were doing. However, my main output of my internship with UTW was designing a monitoring protocol for their coral restoration site. Having never designed one before, I had to read many research articles and papers from other NGOs around the world on how they monitored their coral restoration sites. It was a big responsibility thrust upon me, but I

took it in my stride and wrote out a document on how to monitor the coral restoration site. This protocol will be the main point of accessibility for years to come, and I am very proud of what I wrote! I also improved my persuading skills in work meetings, such as providing strong evidence on why we should monitor the site in X manner. This was one of my SMART goals before undertaking the LiA, and so I am proud to achieve that goal. My favourite part of my coral restoration internship was that I got to test out my protocol at the restoration site. This meant that I had to get a PADI Open Water Scuba Diving Certification, and so I was lucky that I was to experience what Professor Roberts wrote about in his book when he went on his first few dives! Coral reefs are such a unique world, and I now feel that I belong down there observing fish and visiting reefs. It was such an amazing opportunity to dive at the restoration site with Casper, my supervisor and scientific advisor at UTW. It was a pinch-me moment to actually carry out my protocol, where I assessed the outplanted corals health, and Casper assessed the fish and invertebrate diversity, as well as any coral threats. It was also different to Scuba Dive for work for the first time, and I found it very interesting. Another skill that I gained from Scuba Diving was communication, which is so important when diving as you can't talk during a dive, so we had to talk with hand signals! Since that dive, I have become very passionate in coral restoration, and I am considering to go into marine conservation after I graduate. I was also very lucky to visit the coral nursery and help clean coral fragments at the site. I am so thankful to Laidlaw Foundation and Under the Wave for providing me this opportunity to truly discover a passion of mine.

Adapting to new challenges

During my LiA, I had to adapt a lot- the local language is Swahili, and I learnt a beginner's level of Swahili whilst I was there, all thanks to Mr Makame, the communities officer at UTW. I love learning languages, and this one was particularly interesting to learn! It really helped me bridge the language barrier that I'd had with the local community, and when we were at the schools, speaking Swahili to the students helped them open up more to me, and they were also more engaged in the activities because of that.

Overall reflections of my time as a Laidlaw Scholar

After two years of my Laidlaw Programme, I have definitely grown as leader. I have developed so many different skills, because the programme helped me push myself out of my comfort zone, whether it's doing a research project in a different area of Chemistry, or travelling to an island in East Africa and working for a marine conservation NGO. My communication skills have improved significantly, and this semester I'll be a teaching assistant to a class of primary school pupils who are currently learning about coral reefs, where I can convey my passion on to them. Furthermore, I have asked to present my LiA at the Laidlaw conference in Durham, something that I wouldn't have done at the start of my Laidlaw Programme. I would love to be in a mentor role after graduating from the programme, as I thoroughly believe that this programme helps you develop both as a leader and a person. I am so happy that I had the chance to do this programme, and will forever be grateful for the experience to become a more developed leader.

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