



**Laidlaw Scholars Undergraduate Leadership and Research Programme**  
**Record of Reflection**

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## The Mess Beyond the Recipe

I love baking—baking in the sense of following a pre-scripted recipe. As such, I hate the idea of doing things without knowing where they will lead, and I guess, research falls exactly into this category.

When I received the kick-start email, I felt more lost than ever. How could I conduct my own “research” when I did not even have a clear idea of what research was? Even the idea of “Literature Review” or “Methodology” tripped me off. Following guidance, I slowly realized that it was not simply “knowing what to write in each section”, but figuring out how to form a question, and answering it, or forming a new logically-backed argument for an existing question. Particularly, when it comes to methodology, I realized it to be the lens through which I communicated my idea of research (which turned out to be the most important part). And that lens was formed in the most beautifully accidental way. I happened to take an Ordinary Differential Equation course concurrently while doing research, which intrigues the idea of a dynamic system in my mind. The idea that a system could converge toward a stable condition made me wonder whether mathematical models could also help me understand how social and economic outcomes evolve toward persistent patterns. That is when I know I can use, and I actually used what I learnt in my math classes, into my passion for economics, to model an actual problem in reality, and try to solve it.

That moment was intellectually beautiful. More importantly, it showed me what I find so compelling about academia: the possibility of encountering an idea in one field, carrying it into another, and discovering that together, they can help us see a problem in an entirely new way. It sparked in me an even stronger desire to pursue academia, not simply because I enjoy learning, but because I want to keep experiencing moments of discovery like this one.

If methodology was the lens through which I framed the question, data became my first encounter with reality. And as my professor said about working with the data—get your hand dirty. With near-zero experience working with data, this was a real challenge for me. From data cleaning to choosing the appropriate method, everything felt foggy. I had initially imagined research as an almost-linear process: formulate a question, choose a method, run the regression, and obtain an answer. Yet the data quickly showed me that things were rarely that straightforward. But fortunately, I received a lot of advice from both my supervisor, and the Teaching Assistants in the courses I had taken, which helped me to view that problem from a different angle. I not only felt supported but also came to appreciate the value of academic discussion—listening to others, exchanging ideas freely, and learning from one another.

And I came to believe that, as many of my fellows might have experienced, beyond the feeling of being lost was the harder-to-accept feeling of surrender. I had to surrender the expectation that I could control every step, that the data would cooperate, or that the results would necessarily resemble what I had imagined. This was perhaps one of the hardest parts for someone who, like me, had always preferred following a clear path toward a known outcome. However, this was not surrender in the sense of giving up: whenever I felt stuck, I would go outside and think of the day when I could proudly share my research with my passionate fellows on the Laidlaw Scholars Network and at the conference. I felt encouraged again, and found the energy to move one tiny step forward.

Reflecting on that 6-week research period, I realized I had learnt a lot. It is a precious hands-on experience to work on an independent research project, which paved the way for my further education. But beyond the technical skills, I came away with several lessons that I did not expect

to learn. One of them is that I could build my first definition for research: extending beyond fanciful statistical techniques or complicated mathematical models, at its core, research is about coming up with an interesting question, and finding the appropriate way to convey the whole story. And another was that I could never know what I could do or where my limits were until I actually rolled up my sleeves and tried.

And perhaps, the research journey is also non-linear and chaotic when there is no fixed trajectory on the way to answer one, let alone many, questions. Just like the way a baker also feels a “headache” with the mess of flour and eggshell after testing a recipe. Frustrating, but rewarding.