

Laidlaw Scholars Undergraduate Leadership and Research Programme

Research Summer Reflection Report

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My biggest takeaway from this program is that an experience is only as impactful as its reflection. So, this paper serves as a comprehensive analytical reflection of my 2026 research summer experience, interrogating personal growth and future considerations as an aspiring ethical researcher and a globally-minded leader.

1. Impact of Conducting Research on Me

Choosing a self-defined project as a Laidlaw scholar has been the most demanding and rewarding episode of my undergraduate student life. Before university, I had always envisioned an incredibly abstract idea of conducting an academic study on my country in the environmental sector, either through my final-year dissertation or a mysterious force of an opportunity. The Laidlaw Programme was precisely the latter.

During my application days, the freedom to design, propose, and conduct my own project was both exciting and intimidating. Having this intellectual accountability gave me a space to set a challenge for myself to learn completely new technical skills, particularly QGIS, satellite imaging, and quantitative social science data. Starting from the “Congratulations” email, the two incredible residentials and the training provided by the team equipped me with refreshing motivation and confidence in my research. To recall a saying from our climbing instructor during our 2nd residential in Selside: “Confident climbers are those who put themselves in danger more”, and that is exactly who I was. Having the confidence from my first-class first-year scientific reports, I expected this research to progress in a relatively structured and linear manner. It was not.

Stage 1: Reorientating Myself (Week 1)

One of the first challenges was re-familiarising myself with my own methodology. There was a substantial gap between submitting the proposal and the first week of the research. While I had taught myself basic GIS skills during the proposal, I found myself having forgotten most of the steps. Hence, my Week 1 research log shows that much of my effort was directed towards revisiting concepts and rebuilding my understanding of the workflow. I felt I learned so much more than my foundational understanding of conflict, environmental change, and even the political status of my own country.

Stage 2: Navigating Methodological Uncertainties (Week 2)

Just like every other beginning, tackling QGIS was overwhelming while I struggled to find the backbone file of the whole project, which was the ready-to-use shapefile of my study area (Dry Zone). While occasionally panicking, I was able to create my own shapefile using available resources. The frustration even took a physical toll on me as I fell sick after an unproductive day at the library. Being ashamed to admit it, I insisted on keeping up work at the library. Then, this week was the first time I also learned the importance of support when my fellow Laidlaw scholar, Jamiel, took me outside to sunbathe, giving me a chance to reflect. Afterwards, I invited a couple more scholars we had met on the way to mine for dinner. Support took place in the form of company and relatability that we are all in this together, and I realised research is not an individual endeavour.

Stage 3: Technical Challenges and Me (Week 3-4)

Persisting through technical challenges, I became more comfortable learning skills by accepting the progress that comes with repeated failure.

The sky is the limit when it comes to QGIS; the more you learn, the more you realise you know less. Hence, I developed a new methodology of using coding in Python to remove cloud pixels as part of creating vegetation cover layers. Having little coding experience beforehand, I tackled trial-and-error in every step. At the end of the week, I gained momentum both in my learning process and the project, which was the first time I felt like a genuine researcher.

Stage 4: Confronting Self-Doubt with Practicality and Adaptability (Week 5)

Statistically, people between the ages of 40-50 experience the peak of the midlife crisis. Week 5 took place in the exact form of that. As I began producing graphs and interpreting results, I found myself questioning whether my methodology was rigorous, whether the project was achieving what I had initially envisioned. At one point, I realised that the original scope that my supervisor and I had discussed was simply too ambitious to complete within the available timeframe. Revising the scope required me to critically evaluate which components were essential for answering the research question. This involved adopting a different dataset and modifying the parts of the analysis, which made me feel as though most of my earlier work had been wasted. However, this stage of the project taught me so much about resilience. Being able to adapt to new challenges and making realistic decisions without viewing it as failure significantly improved my confidence as a researcher.

Stage 5: A New Man, with a New Plan (Week 6, 7, 8)

The final stage challenged my time and emotion management. Through it, the noises of questioning my project direction went away, and I found myself only refining and strengthening existing ideas.

While carrying out the final analysis of different case studies, I had to read news around certain armed conflict events and their impacts on local communities. Some of these accounts described acts that contradicted my views of humanity and were emotionally difficult to process. Because the project holds personal significance to me, I found it difficult to separate my emotions from the objective and analytical aspects expected in scientific research. On one occasion, after spending several hours reviewing reports, I left the library feeling emotionally drained and overwhelmed.

Taking time to reflect on these experiences helped me develop balance between personal engagement and academic objectives. As workload intensified, I had to relearn how to manage my time effectively and take care of myself physically and mentally. Looking back, I came out as a more emotionally evolved, reflective, and self-aware researcher.

Final Takeaways

Beyond the technical skills, analytical methods, and contextual knowledge of the field I gained throughout the summer, the most valuable lesson was learning how to face and work through challenges. I envisioned research to strengthen my abilities in GIS, remote sensing, scientific writing, and independent problem-solving, but it also taught me far more about myself. Before, I was a confident learner because of my ambition and enthusiasm. By the end of the summer, I became a confident researcher because of the uncertainties, setbacks, and unfamiliar skills I had to persist through.

Although there could have been an improved analysis, a more advanced methodology, or a wider scope, I would not change the experience one bit because of all the meaningful lessons a summer ever could teach me. Hence, in many ways, the project was both exactly and completely different from what I had envisioned.

2. Leadership Skills

Conducting an independent research project with no partner taught me the new dimensions of leadership that require one to lead through uncertainty, setbacks, and unfamiliar challenges. Throughout the summer, several of the Laidlaw leadership capacities were developed in ways I had not imagined at the start of the programme.

Project Management, Prioritisation and Determination

Conducting an eight-week-long research project required me to break long-term objectives into manageable weekly goals and continuously monitor my progress in my research log in Notion – recording the micro-accomplishments, reflections, tasks, and technical notes. I also quickly realised that managing a project also meant managing parts of my personal life that contributed to its success. I accomplished this by maintaining a routine of planning meals, sleeping well, exercising, taking breaks, and managing stress became just as important as the research. Spending around 80% of my working days in the university library helped me build discipline and accountability, even when progress felt modest. Rather than focusing solely on outputs, I learned the importance of trusting long-term processes and maintaining momentum. This experience strengthened my prioritisation and time-management skills while building confidence through my proven discipline of showing up.

Problem-Solving and Adaptability

Early in the research period, I was informed that my supervisor was unexpectedly taking leave until the end of my research, limiting my primary source of guidance at a stage when I was still refining my methods. Initially, this felt daunting, but it required me to become more independent in seeking solutions, setting directions, and making methodological decisions. However, I arranged a necessary meeting with him before his leave, outlining my concerns and ideas, and gathering all the pieces of validation I might need from him.

Another challenge emerged when I realised that the original scope of the project was too ambitious for the available timeframe. Reframing and refining the research design forced me to critically assess priorities, make compromises, focus on the critical analysis to answer the research questions and readjust my weekly objectives. Hence, approximately 80% of the project did not pan out as the set objectives. Learning to make realistic decisions taught me that leadership involves flexibility, and recognising that sometimes adaptation is the most effective solution, without viewing the situation as a failure.

Looking ahead, I am particularly excited to further develop my leadership capacities in communication and influence, and to strengthen my collaborative mindset. After this first summer of challenging my knowledge, the next stage is disseminating my findings, which requires me to engage with wider society and navigate how research can contribute to conversations around environmental change, conflict and even policies. While acknowledging the tremendous personal and academic growth I had as an independent leader this summer, I hope to continue developing as a

researcher who can also effectively communicate ideas, influence positive discussions and work collaboratively with society to create meaningful impact.

3. Dissemination

I plan to apply to present my Laidlaw Research Project at the “Leeds Undergraduate Research Conference ” and the " Leeds Sustainability Conference” in the coming academic year. I will continue to proactively seek opportunities for conferences abroad or at other universities. The final research paper/report will be used to communicate and network with local NGO and researchers, possibly those cited in my paper.

4. Future Career, Educational or Continued Research Plans

Conducting this research broadened my understanding of the range of opportunities available within this field and has helped me think more critically about my future career and educational pathway. While appreciating and learning the value of desk-based research, such as satellite-based research, the experience also increased my interest in field-based environmental research.

The project has also provided me with valuable technical skill sets that I believe will be highly transferable in both further study and professional employment. Many of these have not yet been formally covered within my undergraduate degree at this stage, meaning I have excelled beyond the standard curriculum.

Regarding my further study, my supervisor suggested that I should consider pursuing a PhD after my undergraduate degree. While I am honoured by the encouragement, I want to explore my academic interests further before

making such a long-term commitment. At present, I am more inclined to pursue a one- or two-year master's degree. This project provided greater clarity regarding the opportunities available to me, while strengthening my interest in geospatial research.