RECCS Research Skills

Learner Reflection and Self-Assessment

Directions:

1. **Please review the list of research skills.**
2. **Choose 10 skills from the list that you feel you demonstrated during your RECCS experience.**
3. **For each of your 10 skills, self-reflect by writing a brief response to these prompts:**
    a. **What steps did you take to achieve this skill?**
    b. **Describe what you learned during the process of acquiring the skill.**
4. **Turn in your self-assessment to the RECCS Program Manager at the end of the program.**

1. Conduct a literature review

I conducted a literature review by compiling all of my journal articles in an Excel spreadsheet and determining the main topics and subtopics. I looked up a lot of journal articles on the topic. I sifted through the titles to figure out which were more relevant to my research than others. I learned that a lot of journal articles refer back to other researcher's work.

2. Read and understand journal articles

I read lots of articles to understand my research project topic. I went through the article to find good supplemental information. I learned that there are multiple different types of journals writing. Some of the articles were harder than others to understand.

3. Develop a research question

I developed with the help of my researcher a research question. I first read lots of journal articles and did some internet searches for information on my topic before I came up with my research question. I wanted to do a research question on something relevant to me. I learned that it is not an easy process to come up with a research question to study in 9 weeks compared to 15 weeks.

4. Figure out the next steps in a research project

I had to find out what next steps I had to accomplish in my research based on my getting my work done to meet my researcher's deadlines. My steps were to come up with a problem that needed solving. I looked up my past projects to see whether I had a solution to the problem that I had already solved. I went through the QGIS user manual to find the information or looked through internet results to help solve my problems. I learned that there is a whole lot more to research than just simply solving a problem.

5. Defend an argument when asked questions

During the poster talk as well as during CSDMS meetings I had to defend the work that I was doing and the process that I was using to solve my research problem. For defending an argument I used the background knowledge and citing the research I had gained to help with defending my arguments.

6. Develop a research methodology

I used the data, journal articles, as well as college class knowledge to help with coming up with the research methods. I learned that my research methods had to change if the tool that I was using did not work or if the data that I needed was not there or in the correct format.

7. Use statistics to analyze data

I used statistics to analyze my data. I had to find out what data on my maps were roads, trees, and buildings since all I cared about was the land cover. The steps that I used to achieve the skill were to run the statistics tool and add a color bar to my map so I could easily pick out amongst the land cover what was what.

8. Conduct observations in the lab or field

I did a lot of analyzing my work. I had to make observations about my data to find what data was missing and find where I could get the missing data. I had to make observations to get my results and conclusions.

9. Conduct database or internet searches

I had to conduct a lot of database searches to find the journal articles, and data sets, and learn how to find tutorials for tools I was unfamiliar with.

10. Identify limitations of research methods and designs

The limitation of my data sets is that it was hard to find the data in the primary area where my researcher wanted to find data. I had to pivot my project to a different area where I had lots of data. I found so much data that I had to get an external hard drive to store all my data on. I had to limit my analysis to a small segment of Boulder due to the limited processing power of my computer and the limited time that I had to complete the project.