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Library Research Reflective Essay

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Killer whales have always been one of my favorite animals. I have been tracking the individuals in the Salish Sea known as the Southern Resident Killer Whales for almost my entire life, and I am acutely aware of their falling numbers. So, when we were assigned a marine based showcase project in my ENGL 299 class, I knew what I wanted to write about. However, our assignment required that we analyze at least three scientific papers, and seeing as I was a first quarter freshman, I had exactly zero research experience. Luckily, I was able to get in contact with Kathleen Collins from the UW libraries. Combined with the help of my professor, I was introduced a multitude of new strategies for finding and selecting sources – such as the use of keywords – and was introduced to the Web of Sciences which I used to find most of my papers.

With my newfound knowledge, I started my research. Although I soon discovered that before I could begin to piece together a strong argument, I would have to considerably change my initial topic. I began with the goal of analyzing the effects of light pollution, noise pollution, and lack of food on SRKW health, but as I looked through articles, I noticed that very few of them covered the first two factors. On the contrary, many sources discussed the decline in the Chinook salmon populations in the Pacific Northwest region. This led me to realize that if I wanted to address the root cause of the problem, I was going to have to shift my research to focus on these salmon. Admittedly, my new plan was rather weak. I had hoped that the salmon life cycle would provide insight into why their populations were falling, but searches such as “salmon river spawning” and “Chinook salmon decline” were too broad to present any useful results. However, after bringing this up with my professor, she suggested that I narrow my topic

down even more. After further discussion she brought up the stress that dams place on salmon swimming up the river, and my interest was piqued. I then settled on my final topic, analyzing the effects of dams on Chinook salmon and the SRKW.

My first step was to analyze the relationship between dams and salmon. I easily found the Chinook salmon population status from the United States Environmental Protection Agency, which gave me the base information I needed to start researching their decline. At this point I hit my first roadblock. Going into this, I was under the impression that dams were physically blocking salmon from swimming upstream, but I found little to support this claim. In fact, further research disputed it, showing that fish ladders were providing safe access up the river. With no leads or new keywords in mind, I began utilizing the strategies I learned from Kathleen. I started looking through the bibliographies of related sources and using the Web of Science to locate the most cited papers. This led me to my first scientific paper connecting dam construction to Chinook salmon habitat loss in the Columbia river. This study would end up becoming a staple in my argument, as the information presented in it provided many useful connections and paved the way to many new sources.

As I continued to the second phase of my research, I applied the same strategies. This proved to be successful, and I had a much smoother process navigating through the UW library databases. I identified a paper comparing the severity of lack of food vs vessel traffic on the SRKW, and while the results were not remarkable, the study measured nutritional stress using hormones known as T3 and GC. I was intrigued by this, so I did a bit of extra research into the functions and effects of these hormones on the body. Although it was an unexpected approach for me, it ended up being exactly what I needed, and I found a perfect study relating the changes in these hormones to unsuccessful pregnancies and birth defects.

Now that I had all the information as to what was causing the problem, I wanted to identify a solution. Looking back through all the sources in my bibliography, I noticed that many of them advocated for dam breaching. While this seemed logical, I decided to gather evidence for myself. So, I took to Google in search of conservation articles detailing a successful dam breach. Fortunately, I located an example that occurred in a local river known as The Elwha. Unfortunately, many articles stated that salmon habitats were destroyed following the breach, and I thought that I had hit a dead end. I was preparing to abandon this lead, but after looking over the sources again, I found an obvious pattern that I had not noticed before. The dam breach occurred in 2011, and all my sources predated 2015. I reasoned that since these articles were reporting on the early phases of the project, more recent evaluations would have different results. This ended up being true, and I discovered that the Elwha river today has more habitat for salmon than it has in the past 100 years. This allowed me to piece together a short timeline showcasing the general healing process of the river.

This experience provided me with a lot of new insight into the world of research. I learned that the answer is never as straight forwards as it may seem, and that there are countless obstacles that will force you to rethink your entire process. These obstacles will require you to go down paths you had not previously thought of and lead you to new possibilities. Since this is my first research project, I am aware that I have much room for improvement, but I am excited to apply everything I have learned to my next project.