Reflective Essay – RESL 1000

An amazing journey will explain how my decision to develop research skills has had such an impact on my life during my studies in Kamloops, Canada. This essay will discuss relevant and detailed research activities that I have gained within Kamloops, Canada. Specifically, I will focus on the backgrounds of Biology, Chemistry and Environmental Sciences that allowed me to discover new skills and approach the best attitudes in research. This is later followed by how the research activities have given me a new way of understanding and being able to gain research tools and skills to elaborate effective problem-solving. Furthermore, why such research experiences were so important and valuable for me to grow will be explained. In the end, my futuristic approach will be assessed after gaining substantial research skills from my studies.

I began exploring the field of biology in a Designated Learning Institution. That was when I began experiencing the biology labs in the Len Lepin Building of Thompson Rivers University in Kamloops, Canada. As I was in a group, we had to create an interesting research topic question. That was when the first-ever research activity I did in Biology was the Behaviour of Plumose Sea Anemones in Humans in the course Principles of Biology 1. During the lab sessions, I had the opportunity to get in physical contact with the Sea Anemone to research and use different hypotheses in different trials to see if the same result is achieved. In addition to this, a presentation had to be shown to the class based on the research activity performed in the labs.

On the next note, I did a decent variety of Chemistry courses and research activities in the Ken Lepin Science Building building. One very passionate course was Instrumental Analysis. I received a tour of the different chemical instruments for either research or experimental purposes

that I have used through previous chemistry courses. My favorite research activity within the field of chemistry was the Quantification of Sucrose in Canadian Maple Syrup using a chemical instrument called FTIR. FTIR stands for Fourier Transform Infrared Spectroscopy. This instrument measures the absorption of solid, liquid and gas compounds. Hence, as the absorption is given in the instrument, the concentration can be equally obtained. With that information, I was able to quantify the sucrose concentration in Canadian Maple Syrup.

In the third step, I was also involved in interesting environmental science courses. My most interesting course was Environmental Sustainability. In the course, I developed a research project about Solid and Organic Waste Management in Kamloops. This research topic was developed by me as a potential environmental sustainability issue that has an impact on climate change in Kamloops or British Columbia. Besides researching secondary sources on how waste pollution originated as well as the role of stakeholders and decision-makers, it was still difficult on how Kamloops is currently handling the issue. In the research project, I had to meet legitimate and valid candidates who could provide me with current solutions and tools The City of Kamloops is using to combat this environmental issue.

Looking at the three research activities I was involved, in did give me significant awareness and understanding of how research is started until the very end. Personally, doing a research activity in Biology about the Plumose Sea Anemone was the most difficult moment I had to learn and adapt to elaborating a research activity. This research activity was indeed my very first one and I honestly did not have that much knowledge of research before doing the activity in TRU. That was when I was just observing and listening to what the instructor was saying and my other classmates on how to develop a research plan for this activity. In the end, I learned how to use the elaborated steps of the scientific methods to conduct research. As I observed the Sea

Anemone in the labs, I was able to identify behaviors and gain quantification and qualification data skills to obtain a potential result. In addition, I was able to develop and design a hypothesis that I could visually map what are the impacts on the research activity. In the Quantification of sucrose concentration in Canadian Maple Syrup research activity, I gained significant analytical skills of data to further obtain results. This research activity was one of my favorites because I gained experimental design skills to prepare samples that would measure the true concentration of sucrose in Canadian Maple Syrup. More importantly, I gained a significant value for chemical instruments to make my research work more efficiently and reliable. Without the use of chemical instruments, it would be extremely difficult for me to measure sucrose at a molecule level from my senses. Finally, the Solid and Organic Waste Management research project was very important for me because I truly learned how much value the different stakeholder leaders and decision-makers in cities across Canada can give you data that you can not find elsewhere. I had the opportunity to become greatly educated about waste management by listening to the candidates I selected for the interview process. However, in the research project, I was able to get diagram flow skills and summarizing data skills from case studies that were conducted by The City of Kamloops. In addition, I was able to develop skills as the outcome of the solutions being previously prescribed.

Overall, my research studies at TRU truly taught me how to build a research question, elaborate a research plan and discover any pattern results that allow me to decide on a potential solution. In the future, I see myself elaborating research about plant and animal behavior in a laboratory environment. That way, my research would consist of how wild or predatory these living things survive when they interact with other organisms in this world. In addition, I will most likely pursue analytical research about quantifying concentrations of substrates from products that were

manufactured to assess if these amounts are safe to be used and consumed by humans. Finally, I would elaborate research on the current management process that chemical, pharmaceutical and biotechnological industries follow the standard operative guidelines to produce any goods for the society.