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Reflective Essay: *Prescribing Change for Minority Students: Diagnosing Inequalities in Science Education in the Clark County School District*

As a non-traditional undergraduate student and mother of two, leaving my children to visit the UNLV Lied Library is nearly impossible. Fortunately for me, the UNLV Lied Library has made their research services available at my fingertips through their online website, tutorials, popular questions section, ask a librarian chat, citation and bibliography generator/guidelines, and powerful research databases. Throughout my research process, UNLV Lied Library has been an extension of my living room by having such extensive research materials and services available online. The UNLV Lied Library has proven to be extremely student-centered and a key component of the successful completion of my research project titled *Prescribing Change for Minority Students: Diagnosing Inequalities in Science Education in the Clark County School District*.

Before I began my research process, I used the "Finding Articles" tutorial to learn the proper way to search for articles relevant to my research topic. For example, I evaluated primary sources to ensure they were peer-reviewed and current (year 2000+). To gather primary sources, I began by conducting a critical literature review by searching for research terms related to my questions:

1. What is the relationship between a school's socioeconomic level (Non-Title 1 versus Title 1) and its science curriculum in the Clark County School District?
2. How does the primary race/ethnicity of the students at schools in the Clark County School District correlate with quality of science education?

I searched terms such as science education inequalities, racial inequalities in science education, minorities in science, and Title 1 science education. I reviewed the abstracts from the returned "quick search" articles and downloaded the full text or pdf of the relevant articles through various databases (but especially *Academic Search Premier*). To determine if an article was relevant for my study, I scrutinized the authors' research process and findings, as well as the frequency of citations and the credibility of the journal. After I read and annotated the relevant journal articles, I added the primary source to a running annotated bibliography. I found that not many researchers had analyzed the variation in science education between school social classes before; thus, finding primary articles addressing this aspect of my research proved to be difficult. To overcome this obstacle, as I annotated my collection of primary articles, I noted all research findings that the authors' referenced from other studies. I then searched these articles (and authors) in the library's database to determine if their work was relevant to mine. I completed this same technique for each article that addressed different aspects of study. This process enhanced my understanding of my research topic and gave me another technique to search for primary journal articles.

After completing a substantive literature review, I completed a "critical literature review," which essentially pitted the article's findings against each other to determine the consensus in the field. By doing this, I was able to discover the primary data that reinforced each article's findings, and the findings that utilized a better research process

or explanation. Also, I was able to find that “hands on” science experiences increase a student’s self-efficacy and interest to pursue a science or health related field for a career. I also discovered that mentorship and adult encouragement is particularly important for students of color who come from a low socioeconomic background.

Since my research questions asked about the intersection of race and class in regards to science education, I utilized primary sources not available through the library. These sources included data from the United States Census Bureau, Department of Education, the Clark County School District website, and the Association of American Medical Colleges. In addition, I utilized secondary sources, such as my textbooks from my sociology courses. I was able to integrate the primary sources I found in the Library’s databases and websites, the social theory and concepts I learned in my UNLV sociology courses, and my mixed-methods survey to create an original research project which concluded that there are inequalities in science education occurring in our own backyard to our most marginalized and vulnerable students. The UNLV Lied Library gave me the tools to learn how to conduct successful research - tools that I plan on using during graduate school.