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Reflection

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Over the past Spring 2022 semester, I've been enrolled in Statistics 340 which was instructed by one of my favorite professors, JoEllen Pederson. I had taken a class with Dr. Pederson prior so I was confident that she would help me complete the set objectives she created for this course. I can admit that I was intimidated by the math involved in this course, but I was able to overcome this insecurity. One the first day of class we were informed that the students would be learning the ins and outs of concepts related to statistics followed by the creation of an instruction manual that included a total of eleven chapters.

The first thing I learned in this course was how to add data to SPSS and RStudio. I worked with RStudio in the past for a previous research project I completed with Dr. Pederson and Dr. Bidewell (a professor at Longwood) so working with SPSS was very new to me. As a class we would go through Pederson's instructions step by step to ensure that we were able to establish data sets for the research we were completing. As we would go through each lesson, we would write these instructions in sequential order to serve as a reference aide. Learning to add data sets was the introduction of working with programs for statistics.

The next thing that I learned, which I found vital, was administering multiple tests by hand in addition to the two computer programs. These tests included T-tests, Chi-squared, Correlation, Regression, ANOVA, Confidence intervals, Z-score, and variance. Completing statistical analysis by hand seemed very old-fashioned to me initially but I later realized that

researchers can't always depend on technology for everything so having that extra knowledge was in fact beneficial. I would sometimes run into challenges when completing Independent Samples T-tests by hand considering I had to work with complicated formulas that involved many steps. I also had some trouble with interpreting some of the results from Chi-squared data tests. Fortunately, I was able to overcome these obstacles with a lot of practice problems and the homework we would be assigned.

To reflect more on why the content of this course was useful I must ask myself why it matters for me to learn how to run multiple tests related to statistics. Upon graduation I plan to begin my career as either a middle school or high school counselor. If my plans change and I choose a career that is research based, it would be imperative to be familiar with working with SPSS and RStudio. It would also be a great asset to have knowledge of not only how to administer ethical research but to also test and interpret its results.

Not to mention it would also be a time saver when begin trained for a research position. The employers would most likely require experience for jobs as such and I do have research experience. From a more sociological perspective, being able to practice analytical thinking during these research studies will allow change for the better in our society that citizens can profit from. This progress enables the discovery of solutions once the problems are identified. I would someday like to be part of that change.

Statistics overall are found in our everyday lives. We depend on it for the weather, public health, and other sociological factors. There are a range of fields that involve statistics which stress the reason why it's important to learn about it. The opportunity to teach others about what statistical analysis consists of is there too. This would promote consumer knowledge and encourage awareness of problems that are hopefully due to change in the future.

All in all, taking this statistics course has been a great learning experience. I was able to work more in depth with eleven data tests and practice math problems both by hand and with two computer programs. I can relate all that I've learned to solve everyday problems that I may come across in my life in the future. These situations may include finding the frequency of behaviors I want to change for my health and financial obligations. Or I'd be able to determine the probability of me arriving at my job on time if traffic is heavy one morning. Who knows I might just need my new found statical knowledge for a case I least expect, either way I would be prepared.