Reflection Paper

Student’s Name:

Institutional Affiliation:

Reflection

**Introduction**

I have learned a lot in the statistics class this semester. This paper will involve reflective writing to recount what I have been able to learn in the statistics class. Reflective writing aims to assist in determining from the specific practical experience (DeGroot & Schervish, 2012). It helps in making connections between what was taught in theory and what I am needed to do in practice. This reflection will include descriptive statistics, inferential statistics, hypothesis development, and testing, selection of the appropriate statistical tests and evaluation of the analytical results.

**Descriptive statistics**

I learned that the descriptive statistic is the summary statistic that describes features of the collection information quantitatively. I understood the dissimilarity between the descriptive statistics from the inferential statistics is that the descriptive statistics main aim is to summarize the sample instead of using the data in learning more concerning the population that the data sample is representing (DeGroot & Schervish, 2012). Overall, it means that the descriptive statistics are not generated from the probability theory and usually are nonparametric statistics. The teacher mentioned that even when the data analysis draws the main conclusions by using the inferential statistics, the descriptive statistics are mostly presented. The descriptive statistics can be applied in the Business Information Systems to provide the necessary information concerning the dataset variables and highlighting the association between the variables.

**Inferential statistics**

I learned that the inferential statistics utilize the random sample of data derived from the population for the description and in making of inference concerning the society. The inferential statistics are significant when investigating every member of the whole people when it is not possible or convenient (Hogg *et al.,* 2015).. For instance, when measuring the diameter of every nail which is manufactured in the mill is impractical; however one can measure the diameter of the representative random sample of the pins. I understood that the information from the sample could be used to generalize the widths of the nails. Inference statistics application in the Business Information System to permit the company to test the hypothesis and come up with the conclusion concerning the information.

**Hypothesis development and testing**

I learned that the hypothesis is directly connected to the theory; however, it compromises operationally variables that are defined and in the testable form. Assumption permits us to establish via research if the method is accurate. The teacher mentioned that there is a research hypothesis and the null hypothesis (DeGroot & Schervish, 2012). The null hypothesis is abbreviated H0 with the research hypothesis being abbreviated H0=1. To make research as specific one of the two outcomes are addressed. In concluding that their absence of difference between the means, the null hypothesis is accepted.

Nevertheless, when the null is not true, it is rejected and the conclusion I made that the alternative hypothesis is correct. Hypothesis testing I act in statistics where the analysts carry out the test concerning the population parameter. The employed methodology by the analysts will depend on the kind of the used data and the analysis reasons. In Business Information Systems, hypothesis testing could be set up to determine how the increase in labor will affect productivity.

**Selection of appropriate statistical tests**

When selecting the proper statistical analyses, it was a challenge to me. There is the strategy that is applied when selecting the proper statistical test: it involves the selection of the correct test and afterward the variety of the appropriate sample size for the test. The level of measurement is defined as every variable to be comprised in an analysis (Hogg *et al.,* 2015).  The variables needed to be regular or categorical, ratio level, interval, rank or ordinal ordered. It is done for both the dependent and independent variables. Secondly in the selection of the correct statistical analyses, one will need to clarify what is required to be found. Thirdly the power analysis or the sample size calculation is directly connected to the statistical test that is selected. The estimate of the sample size is based on the alpha, effect size, and power. In Business Information Systems, the selection of the appropriate statistical tests is significant because it will affect the quality of the results.

**Evaluating statistical results**

We learned that the statistical analysis is the quantitative method for establishing the probabilities between groups of data. The study assists in elaborating the patterns or trends found in the research of the topic. The result is analyzed to establish if it is accurate. Evaluation of the statistical analysis is done to check if the null hypothesis is disapproved, to investigate the data quality (DeGroot & Schervish, 2012). The evaluation methods include the ANOVA test. The ANOVA is the tool of evaluation that makes sure that the averages exist within every variable of the test group. When there is not, the sizes of the samples in the analysis might be incorrect. Regression is set up which is the general tool of statistics to establish if the variables have a relationship. The qualitative analysis aspect is analyzed. The researchers provide a summary of what the information means and the entire scope of the study is assessed, and the conclusion is made on the analysis. In the Business Information System, evaluation of the statistical results is essential to check if the quality of the data.

**Conclusion**

In conclusion, I learned statistics which is essential for my career. The statistics topics include descriptive statistics, inferential statistics, hypothesis development, and testing, selection of the appropriate statistical tests and evaluation of the statistical results. The topics are very important for my course, Business Information systems.

 References

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