Statistics assignment week 6

Science, Statistics

Statistics using MANOVA tests Affiliation Multivariate analysis of variance (MANOVA) has got variations similar to those in variance analysis (ANOVA). The one way MANOVA test has a single factor distinguishing participants into two or more quantitative variables and into two groups. A double or mixed multivariate MANOVA has repeated measures between groups and independent variable (within groups) and two or more dependent quantitative variables. Mixed MANOVAs are used majorly to analyze experimental studies that have dependent variables that are more than one. From the output of the descriptive statistics, quiz 1 had the mean with the lowest score and with highest standard deviation. This shows that the students performed the least in this condition. Quiz 2 and 3 had the highest mean score showing that the students performed very highly in the two conditions. The analysis of the means enables the determination of the different patterns of the scores and how they look like. The results of the means show that there is a significant difference connecting the five conditions under which the quiz test was taken. ($F_{(4, 101)} = 4.54$, $p = 0.002$).

There is no correlation between the condition in which the quiz test was taken and how the credit participation was examined. This shows that examining the conditions (variables) on their own doesn't affect or give any variations (Green & Salkind, 2003). However, there is an interaction effect between the condition on of the quiz and the participation in the extra credit ($F_{(4, 412)} = 7.6$, p