

# Research topic research paper example

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## **Research Topic**

An example a research topic that will use ANOVA is comparing the effect of three different methods of rehearsing on the number of words remembered. An instructor maybe interested in comparing the effects of three different methods of rehearsing on the number of words recalled by his or her students. The three methods are imagery, rote rehearsal and story. The researcher will randomly assign participants into three different groups. In each of the groups, the participants are required to study a list of words using the method they have been assigned. The researcher then asks examines them to determine the number of words remembered. The results are then tabulated in a table containing three columns for the three different methods of rehearsal.

ANOVA will be appropriate for this research topic because the research involves grouping the data collected into three groups. ANOVA is suitable if the research involves more than two groups. If there are only two groups, an independent t test can be used. However, if they are more than three groups ANOVA must be used. The research is also interested in comparing the results of the three groups. ANOVA used to compare the results of different groups of data. ANOVA involves studying the effect of qualitative variable or variables on quantitative outcome variable or variables. The qualitative variable is referred to as a factor. In this case, the qualitative variable is the method of rehearsal (imagery, rote rehearsal and story) while the quantitative outcome variable is the number of words remembered by the research participants.

In comparing the effect of three different methods of rehearsing on the

number of words remembered the four assumptions of ANOVA can be assumed to hold. The assumptions are; the expected values of error terms are zero, the resultant errors are independent, if the variance of all the errors is obtained they will be equal and lastly, the errors are normally distributed. These assumptions can be presumed to hold because participants are assigned to different groups and are exposed to only one mode of rehearsal. Therefore, the groups' results can be assumed to be independent.

Possible research questions for this research topic will be;

i. Is there a significant difference between the method of rehearsing (imagery, rote rehearsal and story) and the number of words remembered?

The null and alternate hypothesis for this research topic given the research question will be;

i.  $H_0$ ; there is no significant difference between the method of rehearsing (imagery, rote rehearsal and story) and the number of words remembered.

ii.  $H_a$ ; there is no significant difference between the method of rehearsing (imagery, rote rehearsal and story) and the number of words remembered.

This research will have three independent variables and one dependent variable. The independent variables of the study will be the rehearsal methods. In this case, they will be imagery, rote rehearsal and story. This is because intends to find out whether the method of rehearsal influences the number of words remembered by the research participants. The dependent variable will be the number of words remembered because the research intends to verify if the number of words remembered is influenced by the

method of rehearsal. Therefore, this research topic will utilize one way ANOVA. This is because there is only one dependent variable and three independent variables.

## **References**

Gravetter, F. J., & Forzano, L.-A. B. (2011). *Research Methods for the Behavioral Sciences* (4 ed.). London: Cengage Learning.

Jackson, S. L. (2011). *Research Methods and Statistics: A Critical Thinking Approach* (4 ed.). London: Cengage Learning.