



# **DESCRIPTIVE STATISTICS**

A HANDS-ON APPROACH

**UNIVERSITY OF PHOENIX, ONLINE  
SCHOOL OF ADVANCED STUDIES**

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# DEFINITIONS

Mean

Median

Mode



# MEAN

Average = add all the numbers and divide by the total in the population

Example:

Sample = 7, 5, 9, 9, 2, 6, 4

Mean =  $7 + 5 + 9 + 9 + 2 + 6 + 4$

Total = 42 divide by 7 = 6



# MEDIAN

Average of the two numbers in the middle of the population.

Put numbers in numerical order. The middle number is the median when there is an odd number for the entire population. If there is an even number for the entire population average the two middle numbers

Examples:

- 1) 2, 4, 5, 6, 7, 9, 9 = population with an odd number therefore 6 is the number in the middle
- 2) 2, 2, 4, 5, 6, 7, 9, 9 = population with an even number therefore add 5 + 6 and divide by 2 so the median is 5.5



# MODE

Number Appearing the Most

7, 5, 9, 9, 2, 6, 4 = Mode is 9

Why is the mode important?

helps to make predictions – for advertising

can change the overall population results by skewing the population – an example would be with income



# **ACTION RESEARCH**

Getting involved in the learning process.

Creating meaningful learning experiences for students.



# MAKING RESEARCH UNDERSTANDABLE

Do not report what you do not understand.





# DEVELOPING HYPOTHESIS

Making predictions

favorite car color

average height of students in the class

most popular color for M & M's

possibilities are endless



# IDENTIFY POPULATION

Population is what is being examined. For educational research FERPA is a huge factor. When conducting classroom research with students be cognoscente of FERPA in relationship to the data that you will use.



# MEASUREMENT OF CENTRAL TENDENCIES

These can help to make predictions in relationship to you hypothesis.



# FAVORITE CAR COLOR

## Research Project

Develop Hypothesis

Collect Data

Present data in frequency distribution, histogram, pie graph, line graph, picture graph, the possibilities are endless

Report on the findings in relationship to the hypothesis

Predictions for further research



# M & M'S RESEARCH

