SUMMARY

1. Numbers are one of many tools researchers use to collect data.

2. From the raw data collected, researchers compute the descriptive statistics that convey essential summary data of the dataset as a whole.

3. The normal curve is a theoretical distribution in which the majority of cases peak in the middle of the distribution, with progressively fewer cases as one moves away from the middle of the curve.

4. In normal distributions, one side mirrors the other; the curve is symmetrical.

5. In positively or negatively skewed distributions, the curve is asymmetrical.

6. Frequency distributions and polygons are the first step in analyzing a set of scores for one variable.

7. Descriptive statistics—number of cases, central tendency, and dispersion—are summary information about the dataset for one variable.

8. The number of cases is the number of data points.

9. Measures of central tendency—mean, median, or mode—reflect different types of average or typical data.

10. Measures of dispersion—range and standard deviation—provide a description of the variability of the data.

11. Researchers also use frequencies and percentages to describe their data.

12. Researchers are responsible for the results and their interpretations, even if an expert helps them in this aspect of the research process.

13. Significance levels are set for each statistical test used in a research project; generally, the probability level of .05 is accepted as the standard in communication research.

14. Hypothesis testing is based on probability sampling techniques and the stated level of significance.

15. By convention, researchers are interested in the alternative hypothesis but statistically test the null hypothesis.

16. Hypothesis testing is an act of decision making—accepting the alternative hypothesis or retaining the null hypothesis.

17. Type I and Type II errors occur when researchers accept or reject results as valid when the opposite is true.

KEY TERMS

alpha level	percentage
average	population inference
central tendency	positively skewed curve
data	
dataset	probability
descriptive statistics	probability level
frequency	process inference
inferential statistics	range
mean	raw data
median	significance level
mode	skewed distribution
negatively skewed curve	social significance
	standard deviation
normal curve	Type I error
number of cases	Type II error

See the website www.mhhe.com/keyton4 that accompanies this text. For each chapter, the site contains a:

- chapter outline
- chapter checklist
- chapter summary
- short multiple-choice quiz
- PowerPoint presentation created by Dr. Keyton

For a list of internet resources, visit http://www.joannkeyton.com/CommunicationResearch-Methods.htm.