

AP Psychology Unit 2: Research Methods

College Board Unit Overview:

Psychology is an empirical discipline. Psychologists develop knowledge by doing research. Research provides guidance for psychologists who develop theories to explain behavior and who apply theories to solve problems in behavior. Approximately 8-10% of the multiple-choice section of the AP Psychology Exam will be from this unit.

College Board Unit Objectives:

1. Differentiate types of research (e.g., experiments, correlational studies, survey research, naturalistic observations, and case studies) with regard to purpose, strengths, and weaknesses.
2. Describe how research design drives the reasonable conclusions that can be drawn (e.g., experiments are useful for determining cause and effect; the use of experimental controls reduces alternative explanations).
3. Identify independent, dependent, confounding, and control variables in experimental designs.
4. Distinguish between random assignment of participants to conditions in experiments and random selection of participants, primarily in correlational studies and surveys.
5. Predict the validity of behavioral explanations based on the quality of research design (e.g., confounding variables limit confidence in research conclusions).
6. Distinguish the purposes of descriptive statistics and inferential statistics.
7. Apply basic descriptive statistical concepts, including interpreting and constructing graphs and calculating simple descriptive statistics (e.g., measures of central tendency, standard deviation).
8. Discuss the value of reliance on operational definitions and measurement in behavioral research.
9. Identify how ethical issues inform and constrain research practices.
10. Describe how ethical and legal guidelines (e.g., those provided by the American Psychological Association, federal regulations, local institutional review boards) protect research participants and promote sound ethical practice.

Reading Assignments from Myers' Psychology for AP:

Unit 2: Research Methods (pp. 29-46)

Module 4 – The Need for Psychological Science (pp. 29-37)

College Board Objective: 5

Learning Objectives:

1. Define hindsight bias, and explain how overconfidence contaminates our everyday judgments.
2. Explain how the scientific attitude encourages critical thinking.

Terms: hindsight bias, critical thinking

Module 5 – The Scientific Method and Description (pp. 38-45)

College Board Objectives: 1, 2, 3, 4, 5, 8

Learning Objectives:

1. Describe how theories advance psychological science.
2. Describe how psychologists use case studies, naturalistic observation, and surveys to observe and describe behavior, and explain the importance of random sampling.

Terms: hypothesis, operational definitions, replicate, survey, sampling bias, population, random sample

Module 6 – Correlation and Experimentation

College Board Objectives: 1, 2, 3, 4, 5, 8

Learning Objectives:

1. Describe positive and negative correlations, and explain how correlational measures can aid the process of prediction but not provide evidence of cause-effect relationships.
2. Explain illusory correlations.
3. Describe the characteristics of experimentation that make it possible to isolate cause and effect.

Key terms: correlation coefficient, correlate, scatterplots, illusory correlation, experiment, experimental group, control group, randomly assign, double-blind procedure, placebo effect, independent variable, confounding variables, dependent variable, validity

Module 7 – Statistical Reasoning in Everyday Life (pp. 56-63)

College Board Objectives: 6, 7

Learning Objectives:

1. Describe the three measures of central tendency, and discuss the relative usefulness of the two measures of variation.
2. Explain how we know whether an observed difference can be generalized to other populations.

Key Terms: descriptive statistics, histogram, mode, mean, median, skewed, range, standard deviation, normal curve, inferential statistics, statistical significance,

Module 8 – Frequently Asked Questions about Psychology (pp. 64-70)

College Board Objectives: 8, 9, 10

Learning Objectives:

1. Explain the value of simplified laboratory conditions in discovering general principles of behavior. (CB 8)
2. Discuss whether psychological research can be generalized across cultures and genders.
3. Explain why psychologists study animals, and discuss the ethics of experimentation with both animals and humans. (CB 9, 10)
4. Describe the ethical guidelines that safeguard human research participants.

Terms: culture, informed consent, debriefing