**CHAPTER 1—INTRODUCTION AND RESEARCH METHODS**

**Key Learning Objectives**

* **Define** psychology, critical thinking, and pseudopsychologies.
* **Review** structuralism, functionalism, and the psychoanalytic perspectives.
* **Discuss** modern psychology’s seven major perspectives, and the contributions of women and people of color.
* **Describe** the biopsychosocial model, along with individualistic and collectivistic cultures.
* **Summarize** psychology’s major career options and specialties.
* **Compare** the fundamental goals of basic and applied research.
* **Describe** the scientific method, its key terms, and its six steps.
* **Review** psychology’s four main goals.
* **Discuss** the ethical concerns and guidelines for psychological research.
* **Review** descriptive research and its four key methods.
* **Discuss** correlational research and the correlation coefficient.
* **Identify** the key terms and components of experimental research.
* **Describe** the steps you can take to improve your study habits.
* **Discuss** ways to improve your time management.
* **Discuss** the key factors in grade improvement.

**Involving Students in the Science of Psychology**

Psychology is defined as the scientific study of behavior and mental processes. This chapter explores and applies psychology as a science. First, a brief history of the history of psychology is presented and that is followed by seven modern psychological perspectives. The modern psychological perspectives lead to a discussion of career options in psychology.

The chapter then focuses on psychology as a *science*. The scientific method is outlined. Following the scientific method, the four main goals of psychological research are presented. Various types of research methods are also discussed.

The chapter immediately involves students in the application of psychology by exploring ways to improve study habits and manage their time.

**Chapter Outline**

* 1. **Introducing Psychology**
* Psychology’s Past
* 1879 and Wilhelm Wundt
* Structuralism
* Functionalism
* Psychoanalytic perspective
* Modern Psychology
  + Seven major perspectives
    - Psychodynamic
    - Behavioral
    - Humanistic
    - Cognitive
    - Biological Evolutionary
    - Sociocultural
* Gender and People of Color
  + Mary Calkins
  + Margaret Floy Washburn
  + Francis Cecil Sumner
  + Kenneth and Mamie Clark
* Biopsychosocial Model
  + Individualistic cultures
  + Collective cultures
* Careers and Specialties in Psychology
  + Table 1.4 provides a list

**1.2 The Science of Psychology**

* Basic and Applied Research
* The Scientific Method
  + Process Diagram 1.1—The scientific method
* Psychology’s Four Main Goals
  + Description
  + Explanation
  + Prediction
  + Change
* Psychology’s Research Ethics
  + Respecting the rights of human participants
    - Informed consent
    - Voluntary participation
    - Restricted use of deception, followed by debriefing
    - Confidentiality
  + Respecting the rights of nonhuman animals
  + Respecting the rights of psychotherapy clients
  1. **Research Methods**
* Descriptive Research
  + Naturalistic observation
  + Survey/interview
  + Case study
  + Archival research
* Correlational Research
  + Interpreting a correlation coefficient
  + Limits of correlation
    - Correlation does NOT prove causation
    - Correlations are sometimes illusory---meaning they don’t exist!
  + Value of correlations
* Experimental research
  + Process Diagram 1.2—Experimental research design
    - Six steps involved
  + Variables
    - Independent
    - Dependent
  + Groups
    - Experimental
    - Control
  + Experimental safeguards
    - Sample bias
    - Random assignment
    - Experimenter bias
    - Ethnocentrism
    - Participation bias
    - Single-blind study
    - Double-blind study
    - Placebo effect
  1. **Strategies for Student Success**
* Study Habits
* Four ways to successfully read and remember information
* Familiarization
* Active reading
* Avoid highlighting and rereading
* Take notes
* Process Diagram 1.3—Using the SQ4R method
* Time Management
  + Establish a baseline
  + Set up a realistic schedule
  + Reward yourself
  + Maximize your time
* Grade Improvement
  + Improve your general test-taking skills
  + Overlearn
  + Take study skills courses
  + Distributed practice
  + Practice test taking

**Key Terms**

**Applied research:** Research primarily conducted to solve practical, real world problems; generally conducted outside the laboratory.

**Archival research:** A descriptive research approach that studies existing data to find answers to research questions.

**Basic research:** Research primarily conducted to advance core scientific knowledge, which focuses on fundamental principles and theories; most often conducted in universities and research laboratories.

**Behavioral perspective:** A modern approach to psychology that emphasizes objective, observable, environmental influences on overt behavior.

**Biological perspective:** A modern approach to psychology that focuses on genetics and biological processes in the brain and other parts of the nervous system.

**Biopsychosocial model:** An integrative, unifying theme of modern psychology that sees biological, psychological, and social processes as interrelated and interacting influences.

**Case study:** An in-depth study of a single research participant or a small group of individuals.

**Cognitive perspective:** A modern approach to psychology that focuses on the mental processes used in thinking, knowing, remembering, and communicating.

**Control group:** The group that is not manipulated (i.e., receives n treatment) during an experiment; participants who are NOT exposed to the independent variable (IV).

**Correlation coefficient:** A number from -1.00 to +1.00 that indicates the direction and strength of the relationship between two variables.

**Correlational research:** A form of research that examines whether and how two or more variables change together.

**Critical thinking:** The process of objectively evaluating, comparing, analyzing, and synthesizing information.

**Debriefing:** A discussion procedure conducted at the end of an experiment or study; participants are informed of the study’s design and purpose, possible misconceptions are clarified, questions are answered, and explanations are provided for any possible deception.

**Dependent variable (DV):** The variable that is observed and measured for change; the factor that is affected by (or dependent on) the independent variable.

**Descriptive research:** A research method in which the researcher observers and records behavior and mental processes in order to answer who, what, when and where questions.

**Double-blind study:** An experimental technique in which both the researcher and the participants are unaware of (blind to) who is in the experimental or control groups.

**Ethnocentrism:** The belief that one’s culture is typical of all cultures: also, viewing one’s own ethnic group (or culture) as central and “correct” and judging others according to this standard.

**Evolutionary perspective:** A modern approach to psychology that stresses natural selection, adaptation, and reproduction.

**Experimental group:** The group that is manipulated (i.e., receives treatment) in an experiment; participants who are exposed to the independent variable (IV).

**Experimental research:** A carefully controlled scientific procedure that involves the manipulation of variables to determine cause and effect.

**Experimenter bias:** Bias that occurs when a researcher influences research results in the expected direction.

**Humanistic perspective:** A modern approach to psychology that perceives human nature as naturally positive and growth seeking; it emphasizes free will and self-actualization.

**Hypothesis:** A tentative and testable explanation (or “educated guess”) about the relationship between two or more variables; a testable prediction or question.

**Independent variable (IV):** The variable that is manipulated by the experimenter to determine its causal effect on the dependent variable; also called the treatment variable.

**Informed consent:** A participant’s agreement to take part in a study after being told what to expect.

**Illusory correlation:** A mistaken perception that a relationship exists between variables when no such relationship actually exists.

**Meta-analysis:** A statistical technique for combining and analyzing data from many studies in order to determine overall trends.

**Natural selection**: Darwin’s principle of an evolutionary process in which heritable traits that increase an organism’s chances of survival or reproduction are more likely to be passed on to succeeding generations.

**Naturalistic observation**: The process of observing and recording a research participant’s behavior and mental processes in his or her natural setting, without interference.

**Nature-nurture controversy:** An ongoing dispute about the relative contributions of nature (heredity) and nurture (environment) in determining the development of behavior and mental processes.

**Operational definition:** A precise description of how the variables in a study will be observed, manipulated, and measured.

**Participant bias:** Bias that occurs when a research participant contaminates research results.

**Placebo:** An inactive substance or fake treatment used as a control technique in experiments; often used in drug research.

**Positive psychology:** The study of optimal human functioning; it emphasizes positive emotions, traits, and institutions.

**Psychoanalytic perspective:** An earlier approach to psychology developed by Sigmund Freud, which focuses on unconscious processes, unresolved conflicts, and past experiences.

**Psychodynamic perspective:** A modern approach to psychology that emphasizes unconscious dynamics, motives, conflicts, and past experiences; based on the psychoanalytic approach, but focuses more on social and cultural factors, and less on sexual drives.

**Psychology:** The scientific study of behavior and mental processes.

Sociocultural perspective: A modern approach to psychology that emphasizes the social interaction and cultural determinants of behavior and mental processes.

**Random assignment**: A research technique for assigning participants to experimental or control conditions so that each participant has an equal chance of being in either group; minimizes the possibility of biases or preexisting differences within or between groups.

**Sample bias**: A bias that may occur when research participants are unrepresentative of the larger population.

**Scientific method:** The cyclical and cumulative research process used for gathering and interpreting objective information in a way that minimizes error and yields dependable results.

**Single-blind study:** An experimental technique in which only the participants are unaware of (blind to) who is in the experimental or control groups.

**SQ4R method**: A study technique based on six steps; Survey, Question, Read, Recite, Review, and wRite.

**Statistical significance:** A statistical statement of how likely it is that a study’s result occurred merely by chance.

**Survey/interview:** A research technique that questions a large sample of people to assess their behaviors and mental processes.

**Theory:** A well-substantiated explanation for a phenomenon or a group of facts that have been repeatedly confirmed by previous research.

**Third-variable problem:** A situation in which a variable that has not been measured accounts for a relationship between two or more other variables; also known as a problem of confounding.

**Helping Students Learn!**

In this chapter there are several sections to assist students in relating to and understanding the material.

**Psychology and You—Understanding Yourself**

* Test Yourself—Psychology Versus Pseudopsychology
* Clarifying Social Desirability
* Skills for Student Success Checklist

**Real World Psychology—Understanding the World**

* The Biopsychosocial Model

**PositivePsych**

* What Makes Us Happy?

**PsychScience**

* Why Do Men and Women Lie About Sex?

**Retrieval Practice**

* Introducing Psychology
* The Science of Psychology
* Research Methods
* Strategies for Student Success

**Applying Reals World Psychology**

* A set of five critical thinking questions related to real world examples are provided.

**Lecture Lead-Ins**

1. Ask students to jot down their definition of psychology. Next ask students what types of things do psychologists study. Ask a few students to offer their definitions of psychology. What themes run through the definition? Is science mentioned? Next ask a few students to give some examples of what psychologists study. Are there any themes in the topics? For instance, do most students focus on psychological disorders?

2. As an alternative to the lead-in above, you might want to ask students to list three things that come to mind when they hear the term “psychology”. Ask students to then provide one of their terms out loud. When you call on your students, you may want to ask them to say their name and then give one word from their list. This is helpful to begin to learn students’ names.

3. Before you begin your lecture, ask students about their preconceived notions about psychology: Who do they think of when they hear the term "psychologist?” (They typically mention people like Frasier Crane from TV, Dr. Laura Schlesinger from radio, or Sigmund Freud.) What do they think a psychologist does? (You will probably have a lot of comments centering on a clinical, counseling theme.) Use these two questions to frame your "introduction to introductory psychology." Put the following words on the board:

WHO?

WHAT?

WHEN?

WHERE?

WHY?

HOW?

You can then organize your entire lecture by answering these six questions.

**WHO?**  Discuss the common perception of all psychologists as being clinicians or counselors. List the *areas* of psychology (clinical and counseling, educational, school, industrial/organizational, etc.) and/or list the *schools* of psychology (structuralism, functionalism, psychodynamic, etc.). You may want to emphasize that the MAJOR perspectives that are used today and found throughout this text are the psychodynamic, behavioristic, humanistic, cognitive, biological, evolutionary, and cultural.

**WHAT?**  Define psychology - the *scientific* study of behavior (both overt and covert behavior) and mental processes. Emphasize the scientific foundation and how this differs from common sense.

**WHEN?**  Mention 1879 as the founding of the first psychological laboratory in Leipzig, Germany by Wilhelm Wundt. It helps to mention how this laboratory was important because it established a break with philosophy, but our roots (like biology, history, and most academic subjects) are still reflected in the Ph.D.

**WHERE?** You can mention that until recent times psychology has been focused on Western cultures. But with the increase in multiracial and multiethnic societies and the emphasis on globalization, we now have more interest and research being conducted on other cultures.

**WHY?**  Discuss the four goals of psychology -- describe, explain, predict, and change behavior.

**HOW?**  Discuss the various research methods -- experimental and non-experimental.

4. To lead into the topic of correlational and experimental studiesyou can ask students if anyone in the class smokes cigarettes. You will find people who do. Ask these students why they smoke cigarettes. The answers will vary but will revolve around the theme of "because I want to," or "I am an adult, and I can make choices for myself." At this time point out that we are not allowed to use heroin, cocaine, LSD, or PCP legally in the United States. Ask the question again. "Why can you smoke cigarettes?" You will now get some rather strange looks from the class. Ask the smoker to read the warning label on the back of the cigarette pack and ask the question again, "Why can you smoke cigarettes?" The suggestion on the label is that smoking causes lung cancer. Ask how the government can let a cancer causing substance be sold to the public. Use this discussion as a way to lead into your lecture on correlation and experimental methods. At the conclusion of the lecture, again ask the question. Most of the students will now understand that the research on cancer and cigarette smoking in HUMANS is only correlational. Discuss the merits and limitations of both experimental and correlational research.

**Applications and Exercises**

1. **Introducing Psychology**

This chapter begins by defining psychology as the scientific study of behavior and mental processes. A brief look at the history of psychology presents information on Wundt, Titchner, James, and Freud. The past gives way to the present and the seven major perspectives in contemporary psychology (psychodynamic, behavioral, humanistic, cognitive, biological, evolutionary, and sociocultural) are discussed. Finally, careers and specialties in psychology are examined

**Myths and Misconceptions**

The purpose of this activity is to introduce your students to the many interesting topics that will be covered in an introductory psychology class and to provide students with research findings that they may find counterintuitive.

Make copies of **Handout 1.1 Myths and Misconceptions**. Distribute the copies to your class. Tell students that you want them to answer the questions honestly and that the quiz will not be collected.

After students have completed the handout discuss each statement and the relevant research. This is also a good time to discuss the difference between casual observation and scientific observation.

**Answers to Handout 1.1 Myths and Misconceptions**

1. Actions speak louder than words.

True - When students watched videotapes of people whose self-descriptions conflicted with their actual behavior on characteristics such as "shy" and "friendly," their judgments were influenced much more strongly by what the people did than what they said.

2. Beauty is only skin deep.

False - Attractive people turn out to have higher self-esteem and to be better treated than less attractive people.

3. Cry and you cry alone.

True - Students who had talked on the phone to depressed people were not interested in spending time with these people, compared to students who had talked to non-depressed people.

4. Marry in haste, repent at leisure.

True - People who marry young or after just a short courtship are more likely to seek a divorce later on, in comparison to those who marry after age 20 or after a long courtship.

5. Familiarity breeds contempt.

False - In a variety of studies, people have indicated their preference for items (such as words, symbols, and photos) that they have seen frequently.

6. Opposites attract.

False - Research shows that proximity, physical attractiveness, and similarity are the three most important factors in interpersonal attraction.

7. Misery loves company.

True - Depressed people are more likely to seek emotional support from persons who are also depressed.

8. Spare the rod, spoil the child.

False - Children who are severely punished when young are more likely to develop psychological problems in adulthood than are those whose parents "spared the rod."

9. The squeaky wheel gets the grease.

True - When management students were asked to decide the salary levels of various job candidates, they awarded higher salaries to the applicants who had requested higher salaries.

10. Birds of a feather flock together.

True - Similarity is the single best predictor of long-term relationships (both friendships and love). (Use this item to point out the problems with "common sense" versus scientific studies. Note the contradictions between this item and #6, and even #5.)

**Psychology and the Movies**

Students know and love movies from classics like *One Flew Over the Cuckoo’s Nest* to *Shutter Island*. Ask students to generate a list of films that have psychological themes. You may choose to have students work individually or in groups for this activity. You may also choose to leave “psychological themes” open-ended or provide a more narrow definition. You may want to prep yourself about films by looking at the following website: <http://www.smccd.edu/accounts/merrill/PSYCHOLOGY%20AND%20MOVIES.htm>

Tell students that they can also come up with TV shows. More than likely someone will mention the *Sopranos*. A non-traditional student may remember the *Bob Newhart Show*!

Ask students if they are surprised by the size of the list. Ask them why or why not. Students will begin to realize psychology is all around.

**Seven Major Perspectives**

Place students in groups of two or three. If your class is large, you may want to do this activity as a discussion question.

Ask students to consider a contemporary social problem such as gun violence or alcohol abuse. Next ask students to discuss the problem using the seven major perspectives. For example ask students to discuss how the different perspectives of psychology may be applied in explaining the causes of one being violent. Students should present their answers to the class. Emphasize that by using multiple perspectives, the psychologist is likely to be applying the biopsychosocial model.

**Comparing the Seven Approaches**

The purpose of this in-class activity is to allow students to compare and contrast the seven approaches in psychology. For the first part of the activity, ask students to select two approaches and compare them. Students will need to write down on their paper the similarities between their selected approaches. For the second part of the activity, students must pair up and compare their partner’s selected approaches. Students will need to write down on their paper the differences between their partner’s approaches. After all student work has finished, ask students to volunteer with the class some of their compare/contrast results. This activity has a tendency to validate what other students have already written and provide novel connections/differences for the seven approaches in psychology.

**Applying the Seven Major Perspectives to a Real Life Event**

Around 2:00 a.m. on June 12, 2016, Omar Mateen opened fired at the Pulse Nightclub in Orlando, FL killing 49 people and wounding many more. After holding people hostage at the Pulse Nightclub, Mateen was later killed by the police. Ask students to use the seven major perspectives to analyze this situation. **Handout 1.2 Analyzing a Real Life Event** can be used to help students organize their answers. You may want to have students answer individually and then put them into groups to share their answers. If instructors do not like this tragedy, there are, unfortunately many others to choose from.

**Are You Happy?**

Ask students how happy they believe that they are. Have them describe why they believe they are happy. Ask them what would make them happier. Next have them complete the Happiness Survey found at <http://happiness-survey.com/survey/>

At the next class period, after they have received their score, ask them if their beliefs matched the obtained score. This could also lead to a nice discussion of surveys!

**Careers in Psychology**

**Handout 1.3—Careers in Psychology** can be used to help students review the various career options in psychology and the major activities of each field. This exercise could be used as an in-class handout, presented on a visual presenter, or posted on your course management site.

**Careers and Specialties in Psychology**

Ask students which career or specialty in psychology fits best with how they view psychology and the world. This could be used as an in-class writing assignment, a lecture lead-in, or a discussion area.

1. **The Science of Psychology**

A crucial part of the definition of psychology is that it is a *science*. This section of the text examines the scientific method. Furthermore, the four main goals of psychology: description, explanation, prediction, and change are discussed. Students will begin to see how research applies to their daily lives.

**Is it Basic or Applied?**

**Handout 1.4 Basic and Applied Research** will provide students with an opportunity to think critically about their understanding of both basic and applied research. Be sure and tell students that basic research often paves the way for applied research! This exercise could be used as an in-class handout, presented on a visual presenter, or posted on your course management site.

**Operational Definitions**

Students often understand that it is important to operationally define research terms. Students, however, often do not realize just how difficult it can be to operationally define the terms. To operationally define the terms does not, however, guarantee that there is only one operational definition for any behavioral or psychological concept. Provide students with a list of terms to operationally define. You may choose to use some or all of these terms or make up some of your own. You may also want to have students do this exercise alone or in groups of two or three.

Aggression: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Love: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hunger: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Friendship: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Creativity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Depression: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Justice: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Truth: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sex: ­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Beauty:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bullying:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write each concept on a board or a visual presenter and then record the various definitions given by the class for each concept. An issue of this exercise is that some of the definitions (e.g., creativity) will generate a number of useful operational definitions. In contrast, other concepts (such as love or justice) will be more difficult to obtain agreement on how to measure that concept.

**Anatomy of a Journal Article**

Have the students find research articles (choose articles with Methods, Results, and Discussion/Conclusion sections) from psychology journals. This will be a good time to discuss primary and secondary sources. To prepare for class ask students to identify the different steps of the scientific method. Ask them to decide whether the research is descriptive, correlational, or experimental. In class pair up the students. Have each discuss their findings with their partner. You may also want to discuss these in class.

**Identifying the Goals of Psychology**

The purpose of this activity is to allow the students to practice identifying and explaining the goals of psychology and to develop the critical thinking skill of applying new concepts to real-world situations.

Following your presentation of the goals of psychology, distribute copies of **Handout 1.5 Identifying the Goals of Psychology**. Students can do this exercise in groups or individually.

First, instruct students to complete the worksheet by themselves, and then have them compare answers with the other students. If there is disagreement, they can refer to the text or to you.

**Answers to Handout 1.5 Identifying the Goals of Psychology**

1. Researchers have recently identified a gene that predisposes certain individuals to become obese because their satiety mechanism doesn't turn on.

Goal=Explain--This research answers the question of why people become obese.

2. Some developmental psychologists believe that a much larger number of playground accidents will occur this year among young children who watch *Batman* or *Power Rangers*.

Goal=Predict--Psychologists' statement attempts to guess what will happen in the future.

3. Comprehensive sex education should be required in all high schools because studies demonstrate that such education has reduced the teenage pregnancy rate.

Goal=Change--Statement suggests attempts to change (control) behavior, leading to reduced pregnancy rates.

4. Surveys show that women who graduate from college earn as much money per year as men who graduate from high school.

Goal=Describe--Survey results simply describe what exists in the world.

**Practicing the Goals of Psychology**

The purpose of this activity is to allow students to practice identifying the goals of psychology. This activity should take anywhere from 10 to 20 minutes, depending on your class size. Smaller classes should complete this activity within 10 minutes and larger classes may take closer to 20 minutes. The students will need pencil/pen and one half-sheet of notebook paper.

Ask students to break into student-pairs. If there are an odd number of students, have the last student join up with a student-pair of their choice. Tell students to each come up with a scenario/situation involving at least 2 people. Ask students to write down the scenario/situation on their half of notebook paper. It may be helpful to have students provide names for the individuals in their scenario/situation. Caution students not to use events in their scenario that they have personally experienced- as this might disrupt their next step in the activity. Once students have listed a scenario (for example, a man named Tom was late for his train, and the conductor, Ann, would not let him get on the train), they must give their scenario/ situation to their partner, and write on the opposite sheet of their partner’s paper the four steps: Describe, Explain, Predict, Change, and under each provide a brief summary for their situation.

Once students have completed their four-step processes, ask them to share their discoveries with their partners. The goal of this activity should be realized during these student conversations: partners may provide very different summaries than what the scenario/situation creators had originally intended. This exercise creates an opportunity to smoothly transition into why psychology is a science- as we may never have all the information but by following standard steps, we attempt to explore human behavior and mental processes in a uniform way.

**Thinking About the Goals of Psychology**

Begin by asking students the question:

“*If you wanted to understand someone or something, where do you begin?”*

This question should generate various student responses. It can be helpful to write all

student suggestions on the board. These points can be revisited, or checked-off on the board, later during the lecture -as they relate to the topics covered from the chapter.

Point out to students that those who study, practice, and teach psychology continuously

strive to describe, explain, predict, and (sometimes) change the human experience.

Provide students with the scenario below:

As you walk through the park, you observe two people having (what you consider) a heated conversation on a park bench. Later, after you’ve returned home, your roommate asked you what you saw on your walk. How could you use the four-step process psychologists employ in this scenario?

Ask students to describe, explain, predict, and change. Possible answers are presented below:

**1) You Describe:** Well, while walking in the park I saw two people engage in a heated argument

**2) You Explain:** Well, I assume it was an argument- they were both raising their voices, and trying to talk over one another

**3) You Predict:** I don’t think they resolved the argument- I’m betting they walked away angry

**4) You Change:** Well, perhaps I did not have all the information exactly right... Maybe they weren’t arguing, and if they were, maybe they resolved their differences...

**Respecting the Rights of Human Participants**

Distribute any research study that you would like to students. You may want them to search a data base and bring to class a recent piece of research using human participants. Ask students to describe how they would insure the protection of human participants.

1. **Research Methods**

This section of the text explores how psychologists conduct research. Descriptive, correlational, and experimental approaches to research are discussed. The purpose, advantages, and disadvantages of each method are discussed.

**Applying Research Methods**

Have students get into groups of 3-5 (depending on class size). Give each group the following information: students who attend class tend to earn higher grades. Assign each group a different type of research method (e.g., experiment, survey, correlation, and naturalistic observation). Ask students to provide a hypothesis and describe how the method might be used to obtain the results. Tell students to be sure and think about things like operationally defining “coming to class”. (Hopefully, a group will define coming to class as both being there physically AND mentally). Tell them to be sure and think of confounding variables that may be involved. Remind them to also think in ethical terms.

**Continuing to Apply Research Methods**

This exercise may be used in groups or individually. Psychologists are interested in a number of sensitive social issues such as AIDS, teen pregnancy, drug abuse, addiction, and sexual abuse of children. Describe a study that would improve our understanding of one of these issues. Create a hypothesis and identify the independent and dependent variable. Select a research design and provide an explanation for your decision. Explain what steps you would take to ensure the fair and ethical treatment of your participants.

**Applying Naturalistic Observation**

Naturalistic observation can easily be demonstrated either inside or outside your classroom. If your classroom has windows that will allow your students to observe on-campus activity, you can tell them to look out the window and objectively record a simple behavior, such as "How close do people stand to one another when they talk?" Give them ten to fifteen minutes to make their observations. Reassemble the class, list the results on the board or visual presenter, and incorporate the data into your discussion of naturalistic observation. If you do not have sufficient windows, you can send your students out of the room for a few minutes to record their observations or you can show a videotape of a television show or a movie and have students observe the actors as if they were actually conducting research. During your discussion of on-campus observations, ask if any of the participants noticed they were being observed and whether that changed their behavior. Ask students to think about times when they sing to themselves, such as while driving a car. Ask if they change their behavior if a car pulls up beside them. Ask why.

Other possible hypotheses to test with naturalistic observation: Men tend to study and eat alone whereas women tend to study and eat in groups of two or more. People will generally return a smile with a smile.

**Exploring the Survey**

Have students read the following article titled *Are You Unhappy with Happiness Surveys* <http://www.linkedin.com/today/post/article/20130809130345-143695135-why-i-m-unhappy-with-happiness-surveys>. You may want to make this a class project. Have each student collected survey information on happiness from 4-5 friends and family members. Students can then combined the data or discuss individual findings.

**Exploring Correlations**

Using the *Hippocrates: Good News Survey* (Tierney, 1987) explores correlations with your students. Tell students that the survey found that individuals who ate Frosted Flakes as children had less cancer diagnosis (actually half the rate) compared to individuals who never ate Frosted Flakes. Individuals who ate oatmeal as children had four times more cancer diagnosis than those who did not. Ask your students if this means Frosted Flakes prevents cancer. Does oatmeal cause cancer? Ask your students why these correlations exist. The answer is in the fact that cancer is most likely a disease in later life. People who ate Frosted Flakes tend to be younger. Frosted Flakes was actually not around when the older respondents were children. They would not have eaten Frosted Flakes. Oatmeal was very popular and they would have most likely eaten oatmeal for breakfast.

*Reference:*

Tierney, J. (1987, September/October). Good news! Better health linked to sin, sloth. *Hippocrates*, pp. 30–35.

**Illustrating Correlations**

If you wish to discuss correlation in class, you can ask your students to write their height, shoe size, and birthday on a slip of paper. Collect the slips and write the data on the board or visual presenter. Make sure you start with your own data because this helps to make the students feel better about volunteering their own information about them. Plotting the height/shoe size data should give a reasonable positive correlation. To illustrate zero or near-zero correlation, plot the height data against the birthday data. You may ask students to hypothesize the results prior to collecting the data.

**The Experimental Method**

After discussing the experimental method, students should begin to be able to apply the concepts to potential real life experiments.

Ask students to write a basic outline for two variables they choose to incorporate into a research hypothesis. Included in this outline should be

* A stated research hypothesis
* An operational definition of their experimental method
* A distinction between the independent variable and the dependent variable
* An ethical statement for the experimental method

You may want to provide students with a sample:

**Experimental Hypothesis:** Time of day has an effect on students’ exam scores

**Operational Definitions:**

a.Time of day = the time that the class meets

**Variables**

a. Independent variable = time of day

b. Dependent variable = exam score

**Ethical concerns:**

a. Participants sign an informed-consent

b. No participants are injured or harmed in any way

c. Participants are debriefed after the experiment

These outlines can be brought back to the next class session for either small group or class discussion. This activity can extend student understanding for one of the most common tools psychologists use to scientifically explore the human experience.

**Identifying the Components of the Experiment**

Identifying independent and dependent variables is one of the most difficult tasks for students to complete. Applying real life examples to the experiment and having students practice identifying the components is very beneficial.

Following your presentation of IVs, DVs, and experimental and control groups, distribute copies of **Handout 1.6 Identifying the Components of the Experiment**. Students can do this exercise individually or in groups of 3 or 4. You can also post this handout on your course management site for continued practice.

Instruct students to do the worksheet first individually and then to check with the other students. If there is disagreement, they can refer to the text or to you. Review the correct answers before going on with new material.

**Answers to Handout 1.6 - Active Learning: Labeling Variables and Groups**

1. A researcher is interested in how the activity level of 3-year-olds is affected by viewing a 30-minute video of *Teenage Mutant Ninja Turtles* or a 30

minute video of *Barney*.

IV=Type of video watched-*Barney* or *Teenage Mutant Ninja Turtles*

DV=Activity level of children

Experimental group=Kids watching *Teenage Mutant Ninja Turtles*

Control group=Kids watching *Barney*

B. A therapist wants to test a new drug designed to increase the ability of teenagers with ADHD to take accurate notes in class.

IV=Type of drug given—Ritalin or placebo

DV=Accuracy of notes taken in class

Experimental group=Ritalin

Control Group=Placebo

C. A biopsychologist wants to know whether exposure to testosterone in adult female rats increases their aggressive behavior.

IV=Type of drug given-Testosterone or placebo

DV=Aggressive behavior

Experimental group=Testosterone

Control group=Placebo

D. An industrial psychologist believes that cooling the room temperature may have an impact on productivity of workers on the assembly line.

IV=Temperature of the room—normal or cooler

DV=Productivity

Experimental group=Cooler room

Control group=Normal temperature room

**Want more?** You may want to provide your students with some more practice at identifying research methods. **Handout 1.7 Independent and Dependent Variable Practice** may be distributed in class or posted on your course management site.

**Experimental Controls**

One way to illustrate the need for experimental control is to perform a "rigged" in-class mini-experiment on reaction time. For this demonstration, you will need either a device that measures simple reaction time or two stopwatches. The procedure is similar for both types of equipment. Here is the procedure for using two stopwatches.

First, explain that you want to see whether males or females are faster at stopping a stopwatch. You may ask students to hypothesize the results prior to collecting the data. Ask a male volunteer to come to the front of the room. Hand him a stopwatch and explain that he should start the watch at your first signal, and then stop it as quickly as possible at your second signal. Explain that he will do this three times, and his score will be the total of the three trials, with the lowest score winning. Now allow your male volunteer to practice the procedure a few times and then proceed with the testing.

Next call up a female volunteer. Ask whether she understood the instructions; if not, demonstrate the procedure yourself, being sure not to let this second volunteer have a chance to practice. Now test the female volunteer. If all goes according to plan, the male subject who was able to practice will get the better score. At this time, you can then ask the class to analyze the procedure and point out any problems. (If you want to demonstrate obvious *experimenter bias* you can give outrageous encouragement to the first volunteer. Depending upon whether the volunteer is male or female, students will accuse you of favoring the males or females.)

**Distinguishing Between Experimental and Correlational Studies**

The purpose of this exercise is to allow students to practice using the concepts they have learned and to develop the critical thinking skill of applying new concepts to real-world situations, using cases drawn from newspaper reports.

Following your presentation of correlational and experimental studies, distribute **Handout 1.8 Distinguishing Between Experimental and Correlational Studies**. Students can do this exercise in small groups or individually. Instruct students to do the worksheet first individually and then to check with the other students. If there is disagreement, they can refer to the text or to you. Review the correct answers.

**Advantages and Disadvantages of the Experiment**

To explain further the advantages and disadvantages of the experimental method, ask for volunteers for a smoking and lung cancer "experiment." Indicate that students will be randomly assigned to either the control group (no cigarettes) or the experimental group (three packs of cigarettes a day). Inform the students that the experiment will last twenty years and at the end of the experiment, you will count the number of participants who have developed lung cancer. If the incidence in the experimental group is statistically higher than in the control group, then we can say cigarette smoking causes lung cancer. Point out that TV cameras will be placed in working and living areas of both groups to determine if the experimental group smokes the three packs a day and if the control group does not smoke. In addition, blood tests will be given daily to determine the level of nicotine in each individual's blood in order to monitor cigarette usage. Ask the students to form small groups and list all the problems associated with this hypothetical experiment.

**Putting it Together: Which Design Would You Choose?**

Ask your students to get into groups of three or four and pass out copies of **Handout 1.9 Which Design Would You Choose.** Instruct them that they are to “jot down” their group answers during a period of approximately ten minutes. If some of the groups are not finished in the time you have allotted, go ahead and discuss the correct answers—advising them to write down the answers on their own private copies as a separate study guide.

Remind students that the point of many active learning exercises is to ENCOURAGE critical thinking, and often there is no single correct answer. If the students have logical or even creative ways of providing alternative answers, you may want to praise and recognize the group and their answer. This will help create a more accepting and lively (active) atmosphere, while also encouraging the more inhibited students.

**Want more?** You may want to provide your students with some more practice at research methods. **Handout 1.10 Research Methods Worksheet** may be distributed in class or posted on your course management site.

1. **Strategies for Student Success**

This section of the text strives to help students understand their study habits and the importance of time management. Four ways to successfully read and remember information are provided. The ways are: familiarization, active reading, distributed study, and overlearning.

**Are You a Good Multi-Tasker?**

This activity requires you to **Plan Ahead**! Instructors will need to provide one-stop watch for every two students registered for the class. To avoid a cost burden, ask students in the class prior to the class you will use this exercise to bring in a watch or stop watch with either a second hand or a digital display of seconds. This in-class activity should take 20-minutes to complete. Depending on how the exercise is presented (on a visual projector or on printed copies) materials students need will vary. All students should have a pen/pencil handy to record their responses. **Handout 1.11** contains the materials you need.

**Handout 1.11 Are You a Good Multitasker?** is a version of the Stroop Effect

Ask students to work in pairs, and have one student in the pair record the times of their partner while they complete the tasks listed in the activity. Next, partners should switch, so the timing partner has an opportunity to be timed for the activities.

Students should see how fast they can name the color of each word (not the word itself, but the color it is printed in. In other words, ignore what each word says). Next, students should see how fast they can state the word and not the color.

When students are done, ask them to share their results – and surprise – at the effects of colored words and the colors themselves on their timed recalls.

Most students can read the words much faster than the color the word is printed in. When people have to divide their attention or multitask it typically takes a bit longer.

This is a great time to remind students to focus on their studying and not be answering e-mail, IM, texting, watching television, etc.

**Discussion Questions and Issues**

The questions and issues listed below may be used for class discussion or writing assignments. You may prefer the writing assignments to be informal, in class writing assignments or more formal, outside of class writing assignments. These questions and issues are designed to stimulate student thought about practical issues related to psychology as a science, careers in psychology, and research.

1. After a discussion of the history of psychology you may want to ask students to reflect on the early views in psychology. Ask them which early view did they like “best” and why? How does this view affect their lives? You may also want to ask them which early view they liked “least” and why.
2. After a discussion of the seven psychological approaches ask students what approach best explains their behavior. Have students choose any of their own behaviors that they do often, or that is indicative of their personality. Suggestions include: playing with their hair, biting nails, incessant worrying, smoking, over-eating, drinking too much, addictive behavior relating to playing video games, texting, or cell phone usage, or anything else they feel comfortable discussing or writing about. Ask them to attempt to explain the behavior using at least three of the major psychological approaches. Encourage some of them to share their “findings” with the class, being careful to steer clear of behaviors that would be overly embarrassing or incriminating. Generate a class discussion in which you identify which approaches were most prominent in students’ explanations.
3. Ask students to pretend that they are going into psychology (some may actually be psychology majors) and will be earning their Ph.D. What type of psychologist do they want to become and why?
4. Ask students to discuss how psychology might be applied in different fields of study. For example, if a student is an engineering major or a public administration major, discuss how psychology may play a role in their job responsibilities or impact their career disciplines.
5. The scientific method is described as cyclical. Ask students why the scientific method is described as a cycle rather than as a simple six-step process?
6. Ask students to explain how basic and applied research are related. Ask them to provide examples of how something might begin as basic research but evolve into applied research.
7. Imagine that a researcher recruited research participants from among her friends and then assigned them to experimental or control groups based on their gender. Why might this be a problem?
8. Ask students if they think it is ethical to use deception in psychological research. Why or why not? Are there any circumstances where it is critical to use deception? If not, how can you do some research such as with issues about obedience, stealing, or lying?
9. Have students pretend they are assigned a lab in graduate school that uses animals. How do they feel about using animals in research? What would they do if they are not supportive of animal research, but need to work in the lab to support their education?
10. Ask students if they have a problem with animal research in general, or specific animal research. In other words, do they have a problem with conducting research on monkeys or dogs, but find it okay with rats and mice. Ask them to explain their answers.
11. Psychologists are among the least likely to believe in psychics, palmistry, astrology, and other paranormal phenomena. Why might that be?
12. Researchers often recruit subjects enrolled in college classes. Why might this be an issue?

**Lecture Extenders**

**The History of Psychology**

**Beyond Mary Calkins**

The text book mentions gender and minority influences in psychology. This topic can be expanded on by telling students about several other influential female figures in psychology that are often overlooked.

**Leta Stetter Hollingworth**

Leta Stetter Hollignworth was born in 1886. She is best known for her work with exceptional children. After receiving her undergraduate degree in Nebraska, she moved to New York and married Harry Hollingworth. She continued her education and received a Master’s Degree in Education. In 1920 she began working at the Clearing House for Mental Defectives. It was her task to administer the Binet intelligence test. This, possibly combined with her husband’s interest in intelligence testing (Hollingworth studied under Cattell), furthered her interest in exceptional children. She was the author of several books including: *The Psychology of Subnormal Children* (1920), *Special Talents and Defects* (1923) and *The Psychology of the Adolescent* (1928).

*Reference:*

Benjamin, L. T. (2007). *A brief history of modern psychology*. Blackwell Publishing.

**Christine Ladd-Franklin**

Christine Ladd-Franklin was born in 1847. She attended Vassar and was very interested in physics. Recognizing that studying physics was not an option for women, Ladd-Franklin focused on mathematics. In 1887 she was accepted into Johns Hopkins University with the help of James Sylvester, an English mathematician who knew of her work. She had signed her application C. Ladd and it was assumed that she was a man. Johns Hopkins wished to revoke their offer of admittance, but Sylvester protested. Despite frowning on coeducation and fear of setting precedence, the Board allowed her to stay, but she could only take classes with Sylvester. After demonstrating exceptional abilities in Sylvester’s classes, she was allowed to take classes with other professors. One such professor was Charles Sanders Pierce who was interested in experimental psychology. Women, however, were not allowed to graduate from Johns Hopkins. Even though she had a successful educational experience and wrote her dissertation, she could not obtain a Ph.D. That degree was awarded to her 44 years after its completion when she was 78. After leaving Hopkins she worked with Herman von Helmholtz in the area of visual perception and in particular color vision. Ladd-Franklin was also among the first women inducted into the American Psychological Association.

*Reference:*

Cadwallader, T. C. & Cadwallader, J. V. (1990). Christine Ladd-Franklin. In A. N. O'Connell and N. Felipe Russo, Women in psychology: A bio-bibliographic sourcebook (pp. 220-229). Greenwood Press.

**Psychology as a Science**

**Naturalistic Observation**

The naturalistic method has often been looked upon as a step-sibling to the more rigorous experimental design technique in which one can draw cause and effect conclusions. However, there are many situations in which participant-naturalistic observation reveals data that other methods are not able to tap. An excellent example of this type of research is Rosenhan's study, *On Being Sane in Insane Places*. This study deals with the ability of mental health staff to accurately diagnose the presence of mental disorder in subjects who are asking for admittance to a psychiatric facility. The findings, which could serve as a plot for movie psychodramas where a "normal" person is unable to prove his/her sanity, do not make one feel confident about psychiatric expertise. The following material is based on Rosenhan's article: *(Note: The Rosenhan study is a somewhat unusual example of a naturalistic observation study, but it does utilize a descriptive research approach and reveals some interesting data).*

In this classic study, Rosenhan's intent was to determine if it were possible to distinguish between those who "deserve" a psychiatric label and those who should be exempted from placement in a diagnostic category. He reasoned that the most logical way to measure this would be to take "normal" individuals, those who have never suffered from a serious psychiatric disorder, and have them request admittance to a mental hospital. If they were admitted, then the methods used for making this determination must be flawed.

Rosenhan recruited eight people (including himself) for this study. Their backgrounds included three psychologists, one homemaker, one pediatrician, one psychiatrist, one painter, and one graduate student. Their instructions were to call the hospital for an appointment and, upon arriving at the hospital, they were to report having heard vague voices that said "empty," "hollow," and "thud." Except for this one symptom (auditory hallucinations), they were told to act in a normal fashion, and after admission, to say the voices had disappeared. All questions relative to significant background events, such as family and important childhood events, were to be answered truthfully. The only information to be withheld was their true identity (to prevent the attachment of a permanent psychiatric label to their names), and if they were employed in the mental health profession, to give a false occupation to eliminate the possibility of special treatment. *All pseudopatients were admitted, seven with a diagnosis of schizophrenia.*

Many factors could have led to an error in diagnosis during admission. The pseudopatient indicated the presence of voices (looked upon by many as a first-rank symptom of schizophrenia), the pseudopatients were "nervous" during their initial contact with a psychiatric hospital, and the interaction between the admitting staff member and the pseudopatient was of limited duration. However, after a longer period on the ward, when the patient was engaging in normal behavior, one would expect the staff to recognize that the pseudopatients were not psychotic. This did not occur; the staff did not question the "insanity" of the pseudopatients. When they were released, after periods varying from 7 to 52 days (the average stay was 19 days), those who had been admitted with a diagnosis of schizophrenia were now diagnosed with the label of "schizophrenia in remission." The only persons who recognized that the pseudopatients were not "real" were other patients who asked them why they were there since they were not crazy. (35 out of 118 real patients voiced suspicions.) *The key point of this study was that not one of the pseudopatients was detected by anyone on the hospital staff.* According to Rosenhan, the fact that normal people cannot be distinguished from the mentally ill in a hospital setting points to the "stickiness of the diagnostic label." Once a patient is labeled as "schizophrenic," all of the individual’s behavior is seen as stemming from that label.

Rosenhan speculated that part of the eagerness to diagnose might result from the admitting staffs' unwillingness to turn anyone away. Better to hospitalize someone who may be in need of treatment than to run the risk of suicide, etc. This premise was subsequently tested by informing the hospital staff of the earlier deception with the pseudopatients and by warning them of other pseudopatients who would try to enter within the next three months. Staff members were asked to rate all entering patients with regard to probability of faking on a l0-point scale in which a 1 or 2 indicated a high probability of a pseudopatient. Of the 193 patients who were admitted, forty-one received these low scores, indicating that they were perceived by the staff as pseudopatients. How accurate were the staff members in their perception? They were wrong 41 times— NO pseudopatient had tried to enter. This suggests that poor validity in assessment procedure does not result from being too cautious; rather, the error is in believing that sanity and insanity can be easily distinguished.

From Rosenhan's use of participant-observation we gained the opportunity to better understand the patient's point of view. One of the disconcerting things about becoming a mental patient is the loss of credibility as a person. It was easy for the pseudopatients to see how this would occur. Initiation of conversation between staff and patient was dependent on the staff member; if the patient tried to engage the staff in conversation, the staff member kept walking or failed to make eye contact. Staff members would discuss the patients as if they were not present. Physical examinations would be made in a semipublic room where other staff members casually entered. Personal belongings could be searched by staff, and interview records could be perused by anyone remotely connected with the hospital.

Obviously, the staff members, if they were asked, would have asserted that they did care about the patients: they did not deliberately mistreat them. They simply lacked awareness of the "small" behaviors and daily routines that depersonalize patients and make them feel powerless. This type of information, from the participant point of view, is invaluable in illuminating many aspects of "truth" in the complex interactions that take place in human relationships, either in "real" life or in an institutional setting.

Adapted from Hock, R. (1992). *Forty studies that changed psychology*. Prentice Hall.

*Reference:*

Rosenhan, D. L. (1973).On being sane in insane places*. Science, 179,* 250-258*.*

**The Importance of Informed Consent**

Informed consent is an essential part of any research that is conducted. History demonstrates, however, that informed consent has not always been used. This is true not just in psychology, but also in medicine.

Students have often heard a bit about the Tuskegee experiment. In this research poor, African American men were injected with the syphilis virus as unknowing participants in a study to investigate the natural progression of untreated syphilis. Those who were not injected were not told that they had syphilis, nor were they treated with penicillin when it became available. All the men believed that they were receiving medical care from the U.S. Government. This occurred between the years 1932 and 1972. It was only after a leak to the press did the study end.

*Reference*:

Jones, J. H. (1993). *Bad blood. The Tuskegee syphilis experiment, new and expanded edition*. Free Press.

An additional case to tell students about is the Henrietta Lacks case. Henrietta Lacks was a poor, African American woman who had an aggressive form of cancer. Her cancer cells were removed during a biopsy and studied without her consent or knowledge in 1951. They were the first human cells to be successfully cultivated in a laboratory. These cells have since become known as HeLa cells. Neither Lacks, nor her family, knew that her genetic material would be distributed to labs across the globe. It was only in 1971 that she became publically identified and her family made aware. In 2010, a new book made the general public aware of this case. Recently the National Institute of Health (NIH) came to a resolution with the family that before any new genetic research using HeLa cells can be done there must be approval from two family members.

*Reference:*

Skloot, R. (2010). *The immortal life of Henrietta Lacks.* Broadway Books.

**Animal Research**

Students often feel very passionate about using animals in research. Sometimes it is the use of any animal and other times it is just particular animals. After explaining how animal research has been important in psychology and in medicine, it might be useful to bring in some examples.

Tell students about Seligman’s research on learned helplessness and how it relates to control, depression, or even the inability to leave abusive relationships (Seligman, 1975, 1991). In Seligman’s work dogs were confined to a cage and their foot pads were shocked. Dogs who could not escape the shocks by jumping away (they continued to be shocked) cowered in the corner of the cage. These dogs also responded passively in situations there they could escape. In a sense, the dogs gave up. Dogs that learned that they could escape the shocks responded very differently. These dogs adapted more easily to situations. In a sense, they had control.

You might also introduce students to the work of Harry Harlow and attachment. Harlow (1958) investigated the importance of physical contact on the well-being of baby monkeys. A series of experiments were conducted with newborn monkeys who were separated from their mothers. Surrogate mothers were constructed from either cloth or wire. Baby bottles were attached to each. Harlow used the amount of time spent with the surrogate mom as a measure of attachment. While monkeys would take the bottle from the wire mom, they clung to the cloth mom to help provide comfort. You may want to show students a clip of this research <http://www.youtube.com/watch?v=_O60TYAIgC4>.

*References:*

Harlow, H. (1958). The nature of love. *American Psychologist, 13*, 573-685.

Seligman, M.E.P. (1975). *Helplessness: On depression, development, and death*. W.H. Freeman.

Seligman, M.E.P. (1991). *Learned optimism*. Knopf.

**Relate the Concepts**

The concepts that are discussed in psychology are interconnected. Students do not just learn a concept and then dismiss that concept for another one. For example, in this chapter critical thinking was described. Critical thinking will return in **chapter 8.**

Happiness is discussed in chapter 1. Happiness is obviously an emotion and emotions will be discussed in **chapter 10**

.

If you use the lecture extender, Beyond Mary Calkins, you can show relationships among the concepts. Depression and learned helplessness will also be talked about in **chapter 12,** and attachment will be talked about in **chapter 9**. Future sections on Relate the Concepts will continue to provide some linkages between concepts

**Suggested Web Media**

**INTRODUCTION**

***Discovering Psychology: Past, Present, and Promise* (28:00)**

<http://www.learner.org/discoveringpsychology/01/e01expand.html>

This is from Zimbardo’s *Discovering Psychology* series. This is an introduction to psychology’s topic and a brief historical overview.

**PSYCHOLOGY’S PAST**

**Freud in Pop Culture (1:31)**

<http://www.youtube.com/watch?v=l0Xm6RdLakA>

This brief clip from *The Big Bang* shows a brief discussion of penis envy.

**THE SCIENCE OF PSYCHOLOGY**

***Discovering Psychology: Understanding Research (28:00)***

<http://www.learner.org/series/discoveringpsychology/02/e02expand.html>

This is from Zimbardo’s *Discovering Psychology* series. This is an introduction to the science of psychology and an overview of research methods.

**Correlation is NOT Causation (5:57)**

<https://www.youtube.com/watch?v=8B271L3NtAw>

Iona Smeets discusses the distinction of correlation and causation.

**Suggested Films and DVD’s**

***Candid Camera Classics in Social Psychology***

MCG, 1994, 58:00. There are a total of 15 clips selected and edited by Phillip Zimbardo and Allen Funt from *Candid Camera*. There is one clip (approximately 4:00) that can be used to illustrate bias in surveys. Students find this very amusing.

***Discovering Psychology: Past, Present, and Promise***

Annenberg/CPB, 2001, 28:00. From Zimbardo's *Discovering Psychology* series, this program explores the history of psychology and the present areas of study.

***Endless Questions: Critical Thinking and Research***

Insight Media, 2006, 28:00. This film examines the various types of research methods in psychology.

***Ethics in Psychological Research***

Insight Media, 2013, 19:00. This program Introduces ethical concepts related to psychological research and presents an overview of research studies that have raised ethical issues.

***Experimental Research Methods in Psychology***

Online Classroom, 2004, 28:00. This video explores experimental research methods used in psychology.

***History of Psychology***

Insight Media, 2006, 35:00. This program presents ideas of the mind from Ancient Greece through more modern philosophers.

***History of Psychology***

Films Media Group, 2009, 106:00 (3 parts). This three-part series looks at the history of psychology from ancient influences to the modern times.

***In Search of Ourselves.***

PBS NOVA, 1998, 120:00. This video series traces the history of psychology from the early days to the present.

***Key Issues in Psychological Research***

Films Media Group, 2016, 24:00. This film uses real studies to explore some of the major issues surrounding psychological research.

***Nonexperimental Research Methods in Psychology***

Online Classroom, 2004, 34:00. This video explores the use of nonexperimental methods such as surveys and observations in the field of psychology.

***Positive Psychology and the Study of Human Strengths***

Insight Media, 2015, 32:00. An overview of positive psychology is presented.

***William James: The Psychology of Possibility***

Davidson Films, 2011, 40:00. The work of William James is discussed in terms of his contributions to the field of psychology.

**Suggested Websites**

***American Psychological Association***

<http://www.apa.org>

***American Psychological Association Ethical Principles of Psychologists and Code of Conduct***

<http://www.apa.org/ethics/code/index.aspx>

***American Psychological Association-Students***

<http://www.apa.org/about/students.aspx>

The American Psychological Association provides information to students considering a career in psychology.

***American Psychological Society***

<http://www.psychologicalscience.org>

***Careers in Psychology***

<http://www.apa.org/careers/resources/guides/careers.aspx>

The American Psychological Association provides an overview of careers in the field of psychology.

***Correlation vs. Causation***

<http://jonathan.mueller.faculty.noctrl.edu/100/correlation_or_causation.htm>

This site has several examples of research in the popular press.

***Demonstrations, Tutorials, and Class Materials***

<http://www.uni.edu/walsh/tutor.html>

This site is maintained by Dr. Linda Walsh from the University of Northern Iowa. The site contains numerous links to material for faculty and introductory psychology students.

***Evolutionary Psychology: A Primer***

<http://www.psych.ucsb.edu/research/cep/primer.html>

This site provides an extensive discussion of the principles of evolutionary psychology as well as extensive references for further reading and research.

***History of Psychology***

[***http://psych.athabascau.ca/html/aupr/history.shtml***](http://psych.athabascau.ca/html/aupr/history.shtml)

This is a set of links to many topic areas in the history of psychology.

***Marky Lloyd’s Careers in Psychology Page***

<http://www.psywww.com/careers/index.htm>

Numerous information about careers in psychology is presented at this site.

***Online Experiments in Psychology***

[**http://www.psych.yorku.ca/lab/links/online.htm**](http://www.psych.yorku.ca/lab/links/online.htm)

Students can investigate psychological experiments at this site.

***Research Methods***

[www.appohigh.org/ourpages/auto/2014/1/24/45287148/**variables**.doc](http://www.appohigh.org/ourpages/auto/2014/1/24/45287148/variables.doc)

<http://faculty.frostburg.edu/mbradley/ivdv.html>

[www.wuhsd.org/.../Practice%20in%20Identifying](http://www.wuhsd.org/.../Practice%20in%20Identifying)

Several cites examine the use of independent and dependent variables.

***Today in the History of Psychology***

<http://www.cwu.edu/~warren/today.html>

This site provides a day by day calendar to the historical happenings in psychology.

***University of Akron—Psychology Museum***

<http://www.uakron.edu/chp/>

The University of Akron hosts the Psychology Museum which opened in 2010.

***Women in Psychology***

<http://psychology.okstate.edu/museum/women/cover2.html>

This site provides an overview of the contributions of women to the field of psychology.

**Books of Interest**

Baker, D.B. (2012). *The Oxford handbook of the history of psychology: Global perspectives*. Oxford University Press.

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**Handouts**

**Handout 1.1 Myths and Misconceptions**

*Please answer true or false to the following questions:*

\_\_\_\_1. Actions speak louder than words.

\_\_\_\_2. Beauty is only skin deep.

\_\_\_\_3. Cry and you cry alone.

\_\_\_\_4. Marry in haste, repent at leisure.

\_\_\_\_5. Familiarity breeds contempt.

\_\_\_\_6. Opposites attract.

\_\_\_\_7. Misery loves company.

\_\_\_\_8. Spare the rod, spoil the child.

\_\_\_\_9. The squeaky wheel gets the grease.

\_\_\_\_10. Birds of a feather flock together.

**Handout 1.2 Analyzing a Real Life Event**

Around 2:00 a.m. on June 12, 2016, Omar Mateen opened fired at the Pulse Nightclub in Orlando, FL killing 49 people and wounding many more. After holding people hostage at the Pulse Nightclub, Mateen was later killed by the police. Below are the seven major perspectives in psychology. Describe how each perspective might view Omar Mateen’s behavior.

Psychodynamic:

Behavioral:

Humanistic:

Cognitive:

Biological:

Evolutionary:

Sociocultural:

**Handout 1.3. Careers in Psychology**

*Match each of the following fields of psychology with its principal activity.*

**Field of Psychology Major Activity**

\_\_\_\_\_Clinical 1. Engages in laboratory testing of psychological theories.

\_\_\_\_\_\_Biopsychology 2. Studies thinking process and information processing.

\_\_\_\_\_Cognitive 3. Concerned with social, cognitive, personality growth in

children and adults.

\_\_\_\_\_Social 4. Examines and treats patients in mental health settings.

\_\_\_\_\_Experimental 5. Assists educators to promote greater learning in

students.

\_\_\_\_\_School 6. Discovers relation between emotions, behavior, stress,

and illness.

\_\_\_\_\_Developmental 7. Interested in how individuals are influenced by other

people or groups.

\_\_\_\_\_Industrial 8. Measures brain waves and function of nervous system.

\_\_\_\_\_Health 9. Compares universals and specifics of human behavior in

diverse ethnic groups.

\_\_\_\_\_Cross-cultural 10. Studies organizations, human factor design and

employee training.

**Handout 1.4 Basic and Applied Research**

1. Ask students to generate 5 examples of basic research.
2. Ask students to generate 5 examples of applied research
3. Ask students to think about how basic and applied research may work together.

**Handout 1.5 Identifying the Goals of Psychology**

*In the space to the left of each statement, identify which goal of psychology (describe, explain, predict, or control) is being met by each of these studies. In the space below each statement, briefly explain your choice of goal.*

\_\_\_\_\_\_\_\_1. Researchers have recently identified a gene that predisposes certain individuals to become obese because their satiety mechanism doesn't "turn on.”

\_\_\_\_\_\_\_\_2. Some developmental psychologists believe that a much larger number of playground accidents will occur this year among young children who watch *Batman* or *Power Rangers*.

\_\_\_\_\_\_\_\_3. Comprehensive sex education should be required in all high schools because studies demonstrate that such education has reduced the teenage pregnancy rate.

\_\_\_\_\_\_\_\_4. Surveys show that women who graduate from college earn as much money per year as men who graduate from high school.

**Handout 1.6 Identifying the Components of the Experiment**

*Name the IV, DV, control group, and experimental group for each scenario.*

A. A researcher is interested in how the activity level of four-year-olds is affected by viewing a 30-minute video of *Teenage Mutant Ninja Turtles* or a 30-minute video of *Barney.*

IV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DV\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ExperimentalGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ControlGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B*.* A therapist wants to test a new drug designed to increase the ability of teenagers with ADHD to take accurate notes in class.

IV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DV\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ExperimentalGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ControlGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C*.* A biopsychologist wants to know whether exposure to testosterone in adult female rats increases their aggressive behavior.

IV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DV\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ExperimentalGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ControlGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D.An industrial psychologist believes that cooling the room temperature may have an impact on productivity of workers on the assembly line.

IV \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DV\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ExperimentalGroup\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Control Group \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Handout 1.7 Independent and Dependent Variables Practice**

1. Dr. Imanut wants to examine whether a new drug increases the maze running performance of older rats. Just like aging humans, older rats show signs of poorer memory for new things. Dr. Imanut teaches two groups of older rats to find a piece of rat chow in the maze. One group of rats is given the new drug while they are learning the maze. The second group is not given the drug. One week after having learned the maze she retests the rats and records how long it takes them to find the rat chow.
2. What is the independent variable?
3. Age of the rats
4. Type of maze
5. Length of time it took the rats to run the maze
6. Presence or absence of the new drug
7. What is the dependent variable?
8. Age of the rats
9. Type of maze
10. Length of time it took the rats to run the maze
11. Presence or absence of the new drug
12. A researcher wanted to study the effects of sleep deprivation on physical coordination. The researcher selected 25 year-old-male college students and deprived some of the subjects to either 24, 36, or 45 hours of sleep.
13. What is the independent variable?
14. The length of time the subjects were deprived of sleep
15. The age of the subjects
16. The gender of the subjects
17. The physical coordination skills of the subjects
18. What is the dependent variable?
19. The length of time the subjects were deprived of sleep
20. The age of the subjects
21. The gender of the subjects
22. The physical coordination skills of the subjects
23. A researcher wanted to know whether the number of people present would influence subjects’ judgments on a simple perceptual task. In each case the other member of the group gave an incorrect answer. The researcher then noted whether the subject conformed to the group decision.
24. What is the independent variable?
25. The number of people in the group
26. Whether the group members gave the correct or incorrect answer
27. Whether the subjects conformed with group
28. The type of perceptual task

1. What is the dependent variable?
2. The number of people in the group
3. Whether the group members gave the correct or incorrect answer
4. Whether the subjects conformed with group
5. The type of perceptual task

1. A researcher was interested in the effects of reward on intrinsic motivation. Some children were told that they would be given a special award for drawing with magic markers (an activity they already enjoyed). Other children were simply asked to draw with the magic markers. One week later, the children were unobtrusively observed for how much time they spent drawing with the markers. The children who expected and received a reward for drawing with the markers were less likely to draw with them later.
2. The independent variable is .
3. The dependent variable is .
4. Subjects read about a woman who used a particular title, and then rated her on a number of traits. When the woman used the title Ms. rather than Miss or Mrs. She was assumed to be more assertive, achievement oriented, and dynamic, but also cold, unpopular, and unlikely to have a happy marriage.
5. The independent variable is .
6. The dependent variable is .

Answers

1a. d

1b. c

2a. a

2b. d

3a. a

3b. c

4a. Expected award or not

4b. Time spent drawing with the markers

5a. Type of title used

5b. Rating of woman

**Handout 1.8 Distinguishing Between Experimental and Correlational Studies**.

*For each of the following reports:*

*1. Decide whether the study is correlational or experimental.*

*2. If the study is correlational, briefly describe how the variables are related and whether the correlation is positive or negative. List possible third variables or confounding causes that might also be influencing the results.*

*3. If the study is experimental, briefly describe how Variable A is causing Variable B.*

Study I

A Dartmouth study found that overweight young women (age 23) earned 6.4% less than their non-overweight peers. Additionally, the study found that young men's earnings rose 2% for each 4-inch increase in height.

Study II

An Australian study reported that MSG does not cause people to be sick, as previously reported. The researcher told subjects that he was studying ingredients in a new soft drink and fed them either MSG or a placebo in the drink. The same number and type of symptoms were reported in both the MSG and the placebo groups.

Study III

*USA Today* reported that the stock market ends the year with a gain if the Super Bowl is won by one of the original NFL members—all the NFC teams and the three AFC teams (Indianapolis Colts, Pittsburgh Steelers, and Cleveland Browns).

**Handout 1.9 Which Design Would You Choose?**

*For each of the following research questions, decide which research design would be best and circle it. Then complete your selected design information. Be prepared to discuss the reasons for your selections.*

**Research Question: Is daycare or home care better for later success in elementary school?**

Correlational Design or Experimental Design

Variable 1: Independent Variable:

Variable 2: Dependent Variable:

Limitations: Limitations:

**Research Question: Does schizophrenia run in families?**

Correlational Design or Experimental Design

Variable 1: Independent Variable:

Variable 2: Dependent Variable:

Limitations: Limitations:

**Research Question: Does viewing television violence increase aggressive behaviors in children?**

Correlational Design or Experimental Design

Variable 1: Independent Variable:

Variable 2: Dépendent Variable:

Limitations: Limitations:

**Research Question: Are boys better in math than girls?**

Correlational Design or Experimental Design

Variable 1: Independent Variable:

Variable 2: Dependent Variable:

Limitations Limitations:

**Hanout 1.10 Research Methods Worksheet**

**1. In each of the following examples select the independent variable, dependent variable, experimental group, and control group.**

a. A physiological psychologist injects several monkeys with male hormones and notes that by comparison to control monkeys they display more aggressive acts in a testing situation.

b. A researcher has the hypothesis that drinking two “blue whale” drinks prior to playing volleyball will improve volleyball abilities.

**2. Determine which method would be *best* used for each of the following statements. The methods include: case study, naturalistic observation, survey, correlation, or experiment.**

a. Determining the favorite food of adolescents.

b. Determining if frustration causes aggression.

c. Determining if the level of education and crime rates are related.

d. Determining how teens behave on their first date.

e. Investigating if drinking carrot juice causes improvement of night vision.

f. Determining if doctors’ incomes are related to the grades that they made in med school.

g. Determining if class attendance is related to grades.

h. Determining why a housewife gave up a flourishing career.

**3. For questions a and b:**

a. Consider the following experiment. Fifty preschool children are randomly divided into two groups. One group watches “Barney” on TV every day for a week. The other watches cartoons. Both groups are then given a test that measures creativity in children. In this study the independent variable is:

b. In the experiment just describe, the dependent variable is:

**Answers:**

1. a. IV = male hormones, DV = aggressive acts, EXP GR = monkeys receiving male hormones, CONT GR = monkeys who do not receive hormones.

1b. IV = drinks, DV = volleyball abilities, EXP GR = subjects drinking “blue whales”, CONT GR = subjects not drinking

2.

a. Survey

b. Experiment

c. Correlation

d. Survey

e. Experiment

f. Correlation

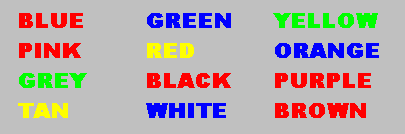
g. Correlation

h. Case study

3a. What the child watched on TV

3b. Child’s score on the creativity test

**Handout 1. 11 Are You a Good Multitasker?**



RED BLUE GREEN

YELLOW GREEN ORANGE

PINK BLACK BROWN

BLUE RED GREEN