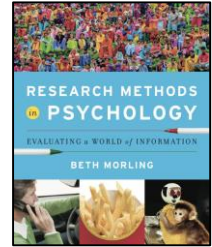


# Psychology 209: Fundamentals of Psychological Research

Bellevue College  
Fall 2014 | Item 5452  
TTh 8:30-10:20 am | Room B104

**Professor:** Tabitha K. Turowski  
**Email:** [tabitha.turowski@bellevuecollege.edu](mailto:tabitha.turowski@bellevuecollege.edu)  
**Office phone:** (425) 564-2329  
**Office location:** D100-A (tower next to the fountain)  
**Office hours:** MW 12:30-2:20pm in office, F 10-11am online  
**Course website:** Accessible through <http://bc.instructure.com>



**Required textbook:** Morling, B. (2011). *Research methods in psychology: Evaluating a world of information* (1<sup>st</sup> ed.). New York: Norton. ISBN-13: 978-0393935462. Please bring your book to class every day.

## INTRODUCTION

Psychology majors must learn the content of psychology, but they also must learn how psychologists know what they know. Fundamentals of Research Methods is a critical thinking skills class in which the main goal is to help you become a better consumer of information—both in psychology and in the real world. You will learn how to systematically evaluate the validity of different claims that you might encounter in a future psychology textbook, in a psychology research article, in the media, or in casual conversation. This class will also teach you how to plan psychological research that can test different claims. You will learn to articulate the pros and cons of different research choices and plan research that optimizes these pros and cons.

## WHAT TO EXPECT IN THIS CLASS

**This is a *hybrid* class with both in-class and online components.** Hybrid classes combine classroom interaction and online resources. Many course interactions are conducted on our course website, including correspondence, completing quizzes, and submitting assignments. To succeed in this class, *you must regularly use a computer with Internet access*. If you don't have a home computer with Internet access, please visit the [open computer lab in N250](#).

If you have questions about the class, **read this syllabus first** before asking your instructor. Take active responsibility for your own education. You will be expected to **read the book before class**, take **notes**, **think** about the stuff you read, and come prepared to **discuss** the ideas with your professor and peers. Challenge assumptions, and consider the implications and applications of course material. Thinking deeply about the course material will not only help you remember it better – it'll make it more useful now and in the future.

**Come to office hours** with questions. Office hours are a set time I have set aside specifically to talk about the class. My door is open and I am *always* available during office hours – no appointment needed. Just stop by! Online office hours are every Friday from 10-11 and can be accessed by the "Friday Office Hours" link on the course homepage.

## LEARNING OUTCOMES

All assignments and in-class exercises are designed to maximize your learning of the following goals. By the end of the course, you should be able to:

- Identify research claims in both popular and scientific sources and classify them as frequency, association, or causal claims.

- Use a framework of “four big validities” (construct, internal, external, and statistical) to ask systematic questions about the evidence behind different research claims.
- Evaluate whether psychologists have measured human behavior reliably and with validity.
- Discriminate between experimental, quasi-experimental, and correlational studies and explain which claims (association or causal) each kind of study can support.
- Design and interpret experiments that study how different factors interact to cause behavior.
- Explain how researchers can improve the ability of correlational studies to support causal claims.
- Describe when we can generalize from the results of a study and when generalization doesn’t matter.
- Apply basic ethical guidelines to research in psychology.
- Use two important tools important to the discipline of psychology: a psychological literature search engine and APA style for writing and citing research papers.

## COURSE REQUIREMENTS

### Participation [200]

This is an active learning class in which we will be doing examples, exercises, and problems in small groups almost every day. If you miss class regularly, you will not participate in these activities and will not learn what you need to learn to progress in the class. You will be assigned to a **study group** of five students. Your group will sit together during class so that you can work together on in-class activities. In daily class activities, your group may turn in a summary or page of work; all group members who are present on that day will sign the work. Another way to participate is by contributing to our weekly Canvas discussion forum with any questions you have about the material from that week. Your total score for this category will be based on the percentage of in-class activities and homework completed.

- **The first 10 participation points of the class are earned by coming to office hours** once during the first month of classes (until 10/23). Office hour times and location are listed at the top of this syllabus. I am happy to arrange an alternate time to meet if none of those times fit your schedule.

### Chapter Quizzes [200]

For the most part, I will not be lecturing in class on material that is also in the textbook. Instead, you will be required to study the textbook ahead of time and take chapter quizzes on the material on Canvas. Each quiz is a random selection of 10 items from a pool of items and will be available on the course website at least one week before the day we start activities based upon that chapter. **Quizzes are due by the start of class on the day we start covering that chapter.** This format requires you to learn the basic material in the textbook before you come to class for activities. Late quizzes will be penalized by 20% per day. You can retake each quiz once and the computer will apply the highest score to your grade. To be eligible for a retake, the first attempt *must* be completed on time. The second attempt must be completed no later than the end of the day (11:59pm) after we complete coverage of that chapter in class. For example, the quiz on Chapter 1 is 9/25, and we start and finish covering Chapter 1 on 9/25 – that means the first attempt must be completed by 8:30am on 9/25 and the (optional) second attempt must be completed by 11:59pm on 9/26.

### Exams [300]

The midterm exam will be worth 100 points and the cumulative final exam will be worth 200 points. Both exams will be given in class in short-answer format and will cover information from both the text and in-class lecture and discussion. The format of the questions will be similar to questions from in-class activities and homework. Make-up exams are given for valid, documented reasons at my discretion. Please let me know as soon as possible if you have a time conflict.

### Popular Press Assignment [100]

You will find and analyze an example of popular press coverage of psychological research. You will find examples of psychological claims in advertising, magazines, and newspapers or on the Internet. The popular source you choose has to include a psychological claim and must discuss it in some detail. This assignment addresses the most fundamental goal of this class: becoming a better consumer of information. You will also practice your literature search and APA style skills. Late assignments will be penalized by 20% per day. Please see the assignment directions in the appendix.

## Research Proposal [200]

As a final project, you will produce an APA style research proposal in which you propose a topic of study, state a hypothesis, and explain the methods you would use to conduct this study and the results you would expect to find. (You will not need to actually conduct the study.) This assignment will consolidate most of what you will learn in this course. Late proposals will be penalized by 20% per day. Please see the assignment directions in the appendix.

## GRADES

Final grades are based on a possible 1000 points as allocated below. It is your responsibility to earn the grade you want. I will use Canvas throughout the quarter to post grades so that you can keep track of your progress. Incompletes are only given under extreme circumstances, and at the sole discretion of the instructor.

Grading Category	Points	Percent	Grade	Percent	Grade
Participation	200	93%+	A	73-76.4%	C
Chapter Quizzes (10)	200	90-92.4%	A-	70-72.4%	C-
Exams (2)	300	87-89.4%	B+	67-69.4%	D+
Popular Press Assignment	100	83-86.4%	B	63-66.4%	D
Research Proposal	200	80-82.4%	B-	<63%	F
<i>Total</i>	<i>1000</i>	77-79.4%	C+		

## COMMUNICATION

### Canvas: The Course Website

This course uses Canvas, BC's learning management system, as a supplement to face-to-face time. Canvas will be used for weekly quizzes, communication, downloading materials, submitting assignments, and so forth. Plan to check it regularly, and use it for all communication about the class. I will respond to all messages within 24 hours on weekdays. Weekend responses may take longer; please plan accordingly. Visit Canvas at: <http://bc.instructure.com>.

### Receive Class Texts

I will be using *cel.ly* as a quick, simple way to communicate with everyone. On *cel.ly*, our class "cell" is a mobile social network that works with any mobile phone or device. You will receive messages, polls, and reminders sent to everyone in the class, and you can also text me individually while keeping both our phone numbers private. Join by texting **@BCPsych209** to **23559**. When you are asked for a username, please use your first and last name. You can use *cel.ly* by simple texting only, or to download the app, choose your OS: [Android](#), [iPhone](#). Participation on *cel.ly* is optional.

## COURSE POLICIES

### Guidelines for Discussion

- The ideas in psychology are interesting and will make you want to talk. When the class is engaged in lecture and whole-class discussion, please **raise your hand** to contribute your opinion. While discussion is encouraged and will be solicited, side comments and off-topic talk will not be tolerated. If you feel tempted to whisper comments to a classmate, consider contributing to the whole-class discussion instead, or writing your comments to share later. You will have many opportunities to share your ideas in groups. If your side comments during lecture become disruptive, I *will* ask you to leave class, and you will not receive participation credit for the day.
- If you find yourself contributing frequently, I may call on other people instead to get a variety of perspectives.
- Some topics we discuss will raise divergent opinions. In an academic setting, everyone has the right to express different views in a respectful atmosphere. Please be considerate of your classmates.

### Technology in the Classroom

Cell phones should be *silenced* and put away before class. Please do not use your phone during class. Students whose cell phones ring, who send or receive texts, check email/social networks, or who wear ear buds during class time will be asked to leave class for the remainder of the class period and will not receive participation credit for that day. In addition, research has shown that using laptops to take notes in class results in *worse* learning of the material compared to the traditional pencil-and-paper method. For this reason, I encourage you not to bring your laptop to class.

### Punctuality

- Please be on time for class. Arriving late or leaving early breaks the flow of the class and causes a distraction. If you arrive late, please do not disrupt class by walking through the middle of the room. If you need to leave early, make arrangements with me ahead of time.
- Please **do not pack up to leave early**. I will always let class out on time. Packing up your things during the last few moments of class is distracting to everyone and may result in missing important information.

### Attendance

You are expected to manage your own time and priorities. If you miss any class session, consult the schedule to see what topics were covered. You are responsible for obtaining notes and information on any in-class announcements from fellow students. **Do not contact me to ask if you missed anything important.** Of course you did. Every class is important. If you have questions concerning the missed class that you are unable to answer yourself *after reviewing a classmate's notes*, please see me during office hours for clarification.

### A Note on Multitasking

Research shows that when we do more than one thing at a time, we're not actually doing them simultaneously. Instead, we're shifting our attention from one thing to another. During that shift, we lose focus, and it takes effort to refocus on the new task. In fact, some research shows that the more often we "multitask," the more distracted we are by irrelevant information, and the worse we are at concentrating. *Limit the temptation to multitask* in class, and you'll do better.

## RESOURCES FOR SUCCESS

### Counseling Center

You can make an appointment for [academic counseling](#) in the Student Success and Counseling Center (2nd floor B building) for help with study skills or test anxiety: 425-564-2212. The Counseling Center also provides free short-term counseling for a wide range of other issues, ranging from stress and depression to relationship problems to sexual assault and other forms of abuse.

### Multicultural Services

MCS specializes in assisting students of color, LGBTQ students, and refugee and immigrant students, but all BC students are welcome to use MCS's services free of charge. MCS is really wonderful at helping all students feel comfortable and welcome at Bellevue College. They will help integrate you into the life of our College. MCS can help with a wide variety of personal and professional challenges, from figuring out how to pay for college and secure childcare for kids, to personal counseling and advising. Stop by their office in B233 or call them at (425) 564-2208.

### TRiO Student Support Services

This department provides excellent academic support for students who have limited incomes, documented disabilities, or who are the first in their families to attend college. Students who join TRiO are given close and intensive academic advising, lessons in study skills, tutoring, and overall support not only as students but as human beings. Learn more by stopping by B233 or visiting the website at <http://bellevuecollege.edu/TRiO/>.

### Tutoring and Writing Help

- Academic Success Center: <http://bellevuecollege.edu/academicsuccess/>
- Academic Tutoring Center: <http://bellevuecollege.edu/tutoring/>

- ASC Writing Lab: <http://bellevuecollege.edu/writinglab/>

### Textbook Study Tools

- After each major chapter section, the “Check Your Understanding” questions give you a short break from reading and a chance to review the key points. These questions are very simple and factual, so they can serve as a basic test: if you cannot answer them, you will want to go back and review the section more carefully. Some students find it helpful to read these questions first, to guide their reading of the section.
- There are several great resources available on the publisher’s website, [StudySpace](#), and on the author’s blog, [Everyday Research Methods](#). And of course, there is no substitute for coming to class and participating in activities and homework.

## PROCEDURES AND GUIDELINES OF THE SOCIAL SCIENCE DIVISION

**Cheating, Stealing, and Plagiarizing\*:** Cheating, stealing, and plagiarizing (using the ideas or words of another as one’s own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at Bellevue College. Examples of unacceptable behavior include, but are not limited to: talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Dean of Student Services for possible probation or suspension from Bellevue College. Specific student rights, responsibilities and appeal procedures are listed in the [Student Code of Conduct](#), available in the office of the Dean of Student Services. A good resource for avoiding plagiarism is the [Writing Lab](#).

*\*If you are accused of cheating, stealing exams and/or plagiarism, there is a Bellevue College Student Discipline and Appeals Procedure (the right to due process) which you may pursue. Contact the office of Division Chair (D110), the Dean of Student Services (B231A) or the Associated Student Body (C212) for information regarding the appeals process.*

**Email Communication** with instructors must be done through student email accounts only. Instructors cannot communicate with students about their course work or grades through students’ personal email accounts.

**Incomplete:** If a student fails to complete all the required work for a course, an instructor may assign the grade of Incomplete (“I”). The student must complete the coursework by the end of the next quarter, or receive the assigned letter grade (usually an “F”).

**F Grade:** Students who fail a course (earning less than 63% of the points) will receive a letter grade of “F.”

**Final Examination Schedule:** The Social Science Division will adhere to the final examination schedule as stated in the BC Schedule. Final examinations will be held at the end of each quarter at fixed times. Instructors will not give examinations in advance of the regular schedule. A student who is absent from any examination held at any time during the quarter may forfeit the right to make up the examination. If, for illness or some other circumstance beyond the student's control, the student is unable to be present at any scheduled examination and has contacted the instructor on a timely basis, the student may be permitted to take such examination at a time designated by the instructor.

**Withdrawal From Class:** College policy states that students must formally withdraw from a class by the end of the seventh week of the quarter (Registration Office, B125). If a student has not withdrawn by that date, an appropriate letter grade will be assigned for the course.

**Hardship Withdrawal:** Instructors may assign the grade of “HW” (hardship withdrawal) at their discretion in the event that a student cannot complete the coursework due to extreme and exceptional circumstances. Students may also contact the Enrollment Services office *before* grades are assigned in cases of hardship.

**Distribution of Grades:** Grades will not be posted in the Social Science Division or in faculty offices, and program assistants or coordinators will not give out grades. Students should access their grades through the BC website.

**Return of Papers and Tests:** Paper and/or Scantron score sheet returns will be arranged in the following ways ONLY: by mail, if student supplies the instructor with stamped, self-addressed envelope (with appropriate postage); or by the instructor designating a

time and place whereby the student may retrieve his/her papers. Unclaimed papers and/or Scantron score sheets must be kept by the instructor for a minimum of sixty (60) instructional days following the end of the quarter.

**Students Who Require Disability Accommodations**

The Disability Resource Center serves students with a wide array of learning challenges and disabilities. If you are a student who has a disability or learning challenge for which you have documentation or have seen someone for treatment and if you feel you may need accommodations in order to be successful in college, please contact us as soon as possible.

If you are a person who requires assistance in case of an emergency situation, such as a fire, earthquake, etc., please meet with your individual instructors to develop a safety plan within the first week of the quarter.

If you are a student with a documented autism spectrum disorder, there is an additional access program available to you. Contact [asn@bellevuecollege.edu](mailto:asn@bellevuecollege.edu) or (425) 564-2764. ASN is located in the Library Media Center in D 125. [www.bellevuecollege.edu/autismspectrumnavigators/](http://www.bellevuecollege.edu/autismspectrumnavigators/).

The DRC office is located in B 132 or you can call our reception desk at (425) 564-2498. Deaf students can reach us by video phone at (425) 440-2025 or by TTY at (425) 564-4110.

Please visit our website for application information into our program and other helpful links at [www.bellevuecollege.edu/drc/](http://www.bellevuecollege.edu/drc/).

**AFFIRMATION OF INCLUSION**

Bellevue College is committed to maintaining an environment in which every member of the campus community feels welcome to participate in the life of the college, free from harassment and discrimination. We value our different backgrounds at Bellevue College, and students, faculty, staff members, and administrators are to treat one another with dignity and respect. Read more here: <http://bellevuecollege.edu/about/goals/inclusion.asp>.

## PSYC 209 Course Schedule

Week	Date	Topic	Reading	Assignment(s) Due Online
<i>PART 1: Introduction to Scientific Reasoning</i>				
<b>1</b>	Tu 9/23	Welcome and Introduction	Syllabus	
	Th 9/25	Psychology is a Way of Thinking	Chapter 1	Quiz: Syllabus, Ch. 1
<b>2</b>	Tu 9/30	Sources of Information: Evaluating, Finding, and Reading Information	Chapter 2	Quiz: Ch. 2
	Th 10/2	Sources of Information (continued) Library Session: APA Style	Chapter 2	
<b>3</b>	Tu 10/7	Three Claims, Four Validities: Interrogation Tools for Consumers of Research	Chapter 3	Quiz: Ch. 3
	Th 10/9	<b>NO CLASS: Instructor at conference</b> <i>Homework: Practice literature search skills</i>		
<b>4</b>	Tu 10/14	Three Claims, Four Validities (continued)	Chapter 3	
<i>PART 2: Research Foundations for Any Claim</i>				
<b>4</b>	Th 10/16	Ethical Guidelines for Psychology Research	Chapter 4	Quiz: Ch. 4
<b>5</b>	Tu 10/21	Identifying Good Measurement	Chapter 5	Quiz: Ch. 5
	Th 10/23	Identifying Good Measurement (continued) Midterm Exam Review	Chapter 5	Research Proposal: Hypothesis
<b>6</b>	Tu 10/28	<b>Midterm Exam</b>	Chapters 1-5	
<i>PART 3: Tools for Evaluating Frequency Claims</i>				
<b>6</b>	Th 10/30	Describing What People Do: Surveys, Observations, and Sampling	Chapter 6	Quiz: Ch. 6 Popular Press Assignment
<i>PART 4: Tools for Evaluating Association Claims</i>				
<b>7</b>	Tu 11/4	Discuss Midterm Exams Bivariate Correlational Research	Chapter 7	Quiz: Ch. 7
	Th 11/6	Bivariate Correlational Research (continued)	Chapter 7	
<b>8</b>	Tu 11/11	<b>NO CLASS: Veterans Day</b>		
	Th 11/13	Multivariate Correlational Research	Chapter 8	Quiz: Ch. 8
<b>9</b>	Tu 11/18	Multivariate Correlational Research (continued)	Chapter 8	Research Proposal: Rough Draft
<i>PART 5: Tools for Evaluating Causal Claims</i>				
<b>9</b>	Th 11/20	Introduction to Simple Experiments	Chapter 9	Quiz: Ch. 9 Research Proposal: Peer Review
<b>10</b>	Tu 11/25	Introduction to Simple Experiments (continued)	Chapter 9	Research Proposal: Revision Plan
	Th 11/27	<b>NO CLASS: Thanksgiving</b>		
<i>PART 6: Balancing Research Priorities</i>				
<b>11</b>	Tu 12/2	The Real World: Generalization, Cross-Cultural Research, and Qualitative Research Methods	Chapter 13 + pdf on Canvas	Quiz: Ch. 13, pp. 385-401; sections from pdf on Canvas
	Th 12/4	Final Exam Review	Chapters 1-9,13	Research Proposal: Final Draft
<b>12</b>	Tu 12/9	<b>Final Exam, 7:30-9:20am</b>	Chapters 1-9,13	

## APPENDIX: Assignment Directions

### Popular Press Assignment [100 pts]

**Due: October 30**

Your assignment is to intelligently critique the claim of the popular press coverage using a psychology research article. Your overall goal is to use your research methods skills to answer this larger question: **Is this popular source's claim an accurate representation of psychology or is it misleading to people?** There are two ways you can achieve this goal.

#### *Option #1 (my preference)*

If the article mentions an author and article, then you can **find the original article** on which the popular coverage is based, read it, and evaluate the quality of the popular coverage. Did the journalist accurately describe the research? Did the journalist offer some advice on the basis of the study (e.g., "Based on this study, you should go bungee jumping in the winter, not the summer!")? If so, is the advice correct or is it based on some misinterpretations of the study? For example, many journalists or advertisers may report a correlational study, but then give advice based upon the misinterpretation that correlation equals causation, which it does not (e.g., "Kids who take piano lessons do better in school! So sign your kid up now!"). Or they may not report that the study was based upon a very particular population and therefore may not be applicable for some of their readers.

#### *Option #2*

For this option, you need to find **at least one empirical, peer-reviewed, psychological journal article on the topic** and see if the journalist's advice is warranted. For example, you may read some potty training advice in a parenting magazine that says you shouldn't punish your kids for potty accidents. Or you may read that "doing a primal scream will reduce your stress level." Is this advice supported in the psychological literature? You will do a literature search to find a source that tests this hypothesis and report its findings. Choosing the right key words and descriptors will be a challenge here. In this option, it is also required that you find a journal article that is of HIGH SCIENTIFIC QUALITY. This means the psychological source you use must be in a journal, report empirical research, be done by a psychologist, and be peer reviewed. See me for help if needed.

### Parts of the Assignment

1. Practice: completion of homework assignment *Psychology in the Popular Press*, due 10/16. [10]
2. A copy or printout of the popular source. [10]
3. A copy or printout of the psychological article you used. [10]
4. A 2-3 page typed report that analyzes the claim. What does the journalist say, or imply, about the study, and is this appropriate? Use the article that you found in your literature search to help you evaluate the claim. You can also bring in basic analytical skills from this class, for instance, the difference between experimentation and correlational studies, the requirements for making a causal claim, and the appropriateness of generalizing results to the readership of the popular source. Your report must include a References section in which you cite your source(s) in perfect APA style. [70]

### Criteria for Quality Work

- Carefully examine the journalist's claim—is it a causal claim? An associative claim? A claim about frequency/level?
- State whether or not the journalist and the researcher are making the same claim (for instance, is the journalist making a causal claim, whereas the researcher is only making an association claim?).
- Address the four big validities (keeping your priorities straight).
- Accurately summarize the article you found, without plagiarizing. You must demonstrate that you have read the article, not just the abstract. Describe the research *in your own words*: we do not typically quote sources directly in psychology.
- Suggest a new, more appropriate version of the popular coverage (if applicable).
- Produced on time, fully meets the assignment's requirements, and in perfect APA style.



## Research Proposal [200 pts]

The research proposal is designed as a culminating experience in this class, integrating your APA style and literature search skills with your knowledge of scientific hypothesis testing, research design and methodology, ethics, and interpreting the results of statistical tests. The purpose of the assignment is for you to propose a research question to be tested and describe the results you would predict. You will complete this assignment in four parts: hypothesis, rough draft, peer review and revision plan, and final draft. Each part has a separate due date and is explained in detail below.

### PART 1 | ESTABLISHING A RESEARCH QUESTION: THE HYPOTHESIS [25]

**Due: October 23**

#### Overview

Research projects are born from the needs of individuals, society, science, previous research, and the ideas of other researchers. Most researchers specialize in certain topics and restricted areas of study over extended time periods. The more research one does, the better-equipped one is to find legitimate research problems. However, for the beginning researcher, finding a topic and a specific problem to research is a somewhat daunting task.

#### Finding a Worthwhile Research Problem

Adapted from Leedy and Ormrod, 2001:

1. *Your study must require collection of new and novel data.* For the purposes of this class, you may not analyze existing data sets, such as 1970 average income versus 1990 average income. Instead, focus on problems that would require you to collect and analyze your own data.
2. *Your problem should focus on finding the underlying cause of something.* As a result, you would not want to propose a study that would simply establish a correlation between two variables. You might want to take an existing correlation, and try to find out why the variables are related. For example, you might want to try to design a study that could explain *why* self-esteem and academic achievement go together.
3. *Read the literature.* This will help you to define your research problem by having you search the Internet for topics. Once you've found some websites, though, you're going to want to read the academic literature to discover the methods that other researchers in the area use, and to get more references. As a result of your literature search you will find yourself in one of the following situations:
  - a. You might determine that no one else is doing research on your exact topic. In that case, you'll need to extrapolate a useful design based on studies of related topics (this is hard, but satisfying in the end).
  - b. You could discover that your idea has already been studied. If that is so, you can:
    - i. Propose a revision of the previous study, using a small design change.
      1. You could use a different type of subject population (women instead of men; children instead of adults) or
      2. You could use a different set of stimuli (pictures instead of words; cognitive behavioral therapy instead of Prozac).
    - ii. Propose a replication of the original study, following their methods exactly.
      1. You might want to offer a different explanation for the findings than the original researcher did, or
      2. You might suggest a different outcome because you think they made a mistake.
  - c. You might find that a previous researcher has suggested some directions for future research that you can use as the basis for your proposal.
  - d. You could recognize that there are contradictory findings in two or more reports. You could propose research that would help to clarify why the contradictions exist, or which report is more likely accurate.

## Phrasing Your Research Problem

Here are some guidelines for developing a useful research question:

1. *Be specific.* If you're interested in learning disabilities, say which one. Dyslexia? Dyscalcula? You're not going to want to study all possible learning disabilities - there are too many to address in a single study. So commit to one particular subpopulation. If further literature review reveals that you'd rather do a different subpopulation, you can always change your mind later.
2. *Say exactly what you plan to examine.* For example, a good question would be something like, "Do elementary-school-aged male dyslexics in Bellevue, Washington benefit from repetition training?" A poor question would be, "Do people with learning disabilities require different training than regular people?" The problems with the second statement are:
  - Who would be included in your subject sample? People? With learning disabilities? That's pretty vague. You would want to specifically define the subject population in terms of variables that might matter. In the "good question" above, I specified the age and the sex of the population of interest, and focused in on dyslexia as the learning disability of interest.
  - Where would the study be conducted? In the "good question," I specifically described the regional location of the population.
  - What would be the manipulation that you're testing? In the "poor question," I vaguely stated "different training." In the "good question," I specified "repetition training" as the variable of interest.

## PART 2 | PROPOSING A RESEARCH STUDY: THE ROUGH DRAFT [50]

***Due: November 18***

Your research proposal should consist of all of the sections of an empirical journal article, in the correct order:

- **Abstract**
- **Introduction**
- **Method**
- **Results**
- **Discussion**
- **References**

A suggested length is provided for each section; feel free to consider this a general guideline. You are welcome to write more concisely than the suggested length so long as you address the scope of the section in sufficient detail.

### 1. Abstract

This should be a summary of the entire proposal, including a brief background introducing what is known about the area of study and why the question is important; the hypothesis to be tested; how you would test the hypothesis, including specific method and predicted results; and why those results would be important – how they would increase scientific understanding of your topic. Write this section after the rest of the paper is complete. *Suggested length: 100 words.*

### 2. Introduction

You should already have some background information, which supported the formation of your hypothesis, so you already have most of this done. Organize your introduction from broad (what area of how people work are we interested in, and why is this important?) to specific (what testable question are you proposing?) *Suggested length: 300 words.*

### 3. Method

Here is where all the details of your operationalization go. Propose a way of studying the question. Include details like: who your participants will be (how will you find them? What age range? Genders? Ethnicities?), how many participants you will test, and how you will assign them to groups. How will you operationalize your conceptual variables? What will

be your manipulated variable? What will be your measured variable? How exactly will you manipulate the manipulated variable? How exactly will you measure the measured variable? What ethical issues have you considered for your proposed method? *Suggested length: 250 words.*

#### 4. Results

If you were to conduct this study, what would you predict the results would look like? You do not need to include details of statistical tests, though you should certainly have an idea of the kinds of tests researchers of your question use based on your background reading. Suggest the hypothetical *patterns* of findings you would see rather than focusing on the statistical details. Include a table or graph of predicted findings and predicted effect sizes for differences between groups. *Suggested length: 200 words.*

#### 5. Discussion

Summarize the proposed findings and why they would be important for our understanding of this area of research. Do not introduce any new sources of information that you have not already mentioned in the introduction. The discussion should also include limitations to your study (usually phrased in terms of external validity) and suggestions for future research (in terms of construct validity or external validity). *Suggested length: 300 words.*

#### 6. References

Start keeping a running list of background information. Every time you cite something from the academic literature in your introduction, add it to your reference list. You can format each reference in APA style as you go, or do them all at the end – whatever feels easiest to you. You must include at least *six references* from peer-reviewed journals.

Checklist for Submission:

- ☐ A *complete* paper, addressing all six sections and reasonably close to the suggested word count in each section.
- ☐ Formatted in APA style (please see sample on p. A68 at the back of your book).
- ☐ Correct spelling and grammar (have someone proofread this for you if needed).

### PART 3 | PEER REVIEW AND REVISION PLAN [25]

#### Peer Review

Peer reviews will be automatically assigned online for people who have submitted their paper by the due date. You will need to check to see whose paper you have been assigned to review. If you submit your paper late, please contact me so I can manually assign a peer reviewer. Directions for completing the peer review and reviewing rubric will be posted online.

***Your review of your peer's paper is due: November 20.***

#### Revision Plan

You will also need to respond to your peer's comments on *your* paper by articulating your plans for revising your paper. You'll also have an opportunity on the quiz to share what you learned by having your paper reviewed and by reviewing a classmate's paper. Directions for completing this can be found on the course website.

***Your revision plan for your paper is due: November 25.***

### PART 4 | PROPOSING A RESEARCH STUDY: THE FINAL DRAFT [100]

***Due: December 4***

Your final draft should incorporate feedback from your instructor and peer reviewer and adhere to your stated revision plan. Late papers will be penalized by 20% per day late. The grading rubric I will use for this assignment can be found on Canvas.