

Psychology 310

Psychological Research Design and Analysis

Fall Semester 2017
Section 006: 1145 SWKT on M at 12:00 (Noon) - 2:50 pm

Instructor: Erin D. Bigler, PhD, Professor
Office: 1190D SWKT
Office Hours: TBA (by appointment call (801) 374 – 8536)
Office Phone: (801) 422-4287
Email: erin_bigler@byu.edu
Teaching Assistant: Rebekah Ehlert
Email: rebekah.ehlert@gmail.com
Office Hours: (TBA and by appointment)

Texts & Materials

Required



**Research Methods in Psychology:
Evaluating a World of Information**
Beth Morling, Ph.D., ISBN-13: 978-0393936933
ISBN-10: 0393936937 N.Y.: W.W. Norton &
Company.

Recommended: Option Only



American Psychological Association (2009) *Publication Manual* (6th Edition).
Washington, D.C. (**WARNING:** make sure to get the 2nd or 3rd printing of this if buying used
so that all mistakes have been corrected from 1st printing)
ISBN-10: 1433805618
ISBN-13: 978-1433805615
American Psychological Association

Class Description

Class Mottos:

“Prove all things; hold fast that which is good.”
1 Thessalonians 5:21

“For God hath . . . given us the . . . power . . . of a sound mind.”
2 Timothy 1:7

Class Quotes:

“Unless we learn to think differently, we are doomed to self-extinction.”
-A. Einstein

“In young scientific fields if you say all the accepted positions are wrong, you’ll seldom be wrong.”
- Jeremiah Ostriker, Chair, Astronomy and Astrophysics, Princeton

“Anecdotes do not make a science. Ten anecdotes are no better than one, and a hundred anecdotes are
no better than ten.”
-Frank J. Sulloway, University of California at Berkley

Class Objectives: To gain a solid understanding of how to design and carry out and record valid and reliable research and as a consumer how to evaluate and appraise research of any kind by increasing knowledge in the basics of scientific psychology, basic research methods, research topics, ethical research; learn how to do literature searches and complete a "hands on" scientific research project/experiment in psychology; learn how to develop and write an hypothesis, a research proposal and to successfully complete a paper describing the project as needed for publication including appropriate title, abstract, introduction, methods, results, and discussion and an extensive bibliography.

Prerequisites

Psych 210 – A History of Psychology.
Psych 307 – Writing Within Psychology.
Psych 308 – Psychological Statistics.

NOTE: Psych 309 must be taken prior to or concurrently with Psych 310. It contains content featured in the Graduate Record Examination (GRE).

Classroom Procedures

Pay attention to the syllabus -sometimes the class will not be in the regular classroom but assigned elsewhere.

Attendance Policy

Attendance is not taken but quizzes and opportunities for extra credit and special assignments and group assignments will be missed if class is not attended.

Participation Policy

Although attendance is not taken, you are expected to read the text as assigned in advance of each class and come prepared to participate in class discussions pertaining to those readings - class time is not a repeat of what is in the text but will be used to add to and clarify the knowledge about research design and methods learned in the text.

Grading Policies

Late Assignments: All assignments are due on the date indicated above. Late assignments will be docked one full grade for each day (or fraction thereof) late. If a class experiment or critique is late by 3 days or more, the maximum possible grade is a C-. Please do not try to negotiate an exception or change to this unless you have a very good reason. We want to be fair, not naïve.

Grades: Each exam is worth 100 points. The final exam is worth 200 points. The in-class experimental write-ups/projects are worth 150 points each. The journal article critiques are worth varying points each. Your individual final project (experiment) is worth 200 points and the oral presentation is worth 90 points. A total of 1,150 points are possible for the course.

Learning Outcomes

1. Critically review literature

Students will be able to critically review the literature to generate a testable hypothesis based on a summation of current research findings and scientific thought. *Measurement:* Writing assignment.

2. Methodological designs

Students will be able to distinguish between methodological designs and implement and execute an appropriate design to test the hypothesis, demonstrating an understanding of and sensitivity to relevant ethical considerations, including how to identify and measure dependent variables and measure or control for independent and other variables critical to the design of the study. *Measurement:* Multiple choice tests, short essays.

3. Written report of research

Students will be able to prepare a written report of the research project adhering to APA style in all aspects of presentation (e.g., format, figures/tables, referencing) in a format that would be suitable to submit to an APA journal. *Measurement:* Writing assignment.

4. Present research orally

Students will be able to present the research orally to an audience of peers in either a paper or poster format. *Measurement:* Presentation assignment.

5. Critically evaluate published research

Students will be able to critically evaluate the quality of published research. *Measurement:* Writing assignment.

6. Technology and Effective Research

Use computers and other research-related technology to collect, access, manage, and interpret research information. *Measurement:* Presentation and Writing Assignment.

Grading Scale

A	93 and above	B-	79.5	D+	66
A-	89.5	C+	76	D	62
B+	86	C	72	D-	59.5
B	82	C-	69.5	E	59 and lower

Assignment Descriptions

Journal Critiques (2 Written):

The 1st one will be assigned. These are to be two-page critiques (using APA style) of a scientific psychology journal article and are due on the dates listed. Both articles will be assigned and available through the Harold B Lee Library on-line—you will be given the particulars of the article and then you will need to track it down for your use in the critique. Follow the handout at the end of the syllabus for the style you should use for writing this critique. Note: critiques do not have to be negative – remember that you are to follow the guidelines that are below.

Experiments (3 Write-Ups):

The first two experiments will be done in class. These are for Experiment Write-Ups #1 and #2. All class members will write up the same experiment although you will have some flexibility of what data to analyze and how to analyze it. Each individual student will be responsible for his or her own Title Page, Abstract, Introduction and Discussion, Acknowledgments, and Reference sections. The Methods section and Results section may be a group effort.

In addition: You will need to write-up a third Final Project from which you will also give an Oral Presentation that represents a separate group experiment using data selected from in-class experiments or from another research topic of interest. If you select an out-of-class project, these research topics require previous approval from Dr. Bigler and the appropriate research review committees (i.e., IRB approval). **This write-up is due the last day of class--no exceptions.** You will be organized into small groups where the group will write one Method and one Results section, which include Figures and Tables. If you work in a small group there will only be one grade given for the Methods and Results sections. The Introduction, Discussion, and the References sections will be graded individually for each student in the group, unless you want to hand it in as a coauthored paper and all receive exactly the same grade – this is to be verified with the professor with all in the group present and in agreement.

2018 Mary Lou Fulton Endowed Chair—13th Annual Mentored Student Research Conference:

****The College of Family, Home and Social Sciences invites undergraduates and graduate students to participate in the annual Mentored Student Research Conference by the Mary Lou Fulton Endowed**

Chair. The conference is a full day event designed to showcase mentored student learning. It is an opportunity for students to present and explain their research to the public. Students from all departments in the college are encouraged to participate by preparing a poster illustrating the hypothesis, process and results of their research. **The upcoming conference is Thursday, April 12, 2018 see <https://fultonchair.byu.edu/Pages/dates.aspx>**

Even though this is next semester you are encouraged to prepare a poster to present at the research conference. Poster Sessions are 9 a.m. - 11:50 a.m. and 1:30 p.m. - 3 p.m. Although some students will need to leave the conference for classes and prior engagements, students are encouraged to attend as much of the conference as they can. Judging will take place during the first poster session. Prizes of money are awarded for best research projects in different departments and colleges. Participating students are also invited to attend the complementary annual conference lunch at 12:00 noon, where they have the opportunity to network with fellow students, faculty and other guests. **The deadline for poster submission is Thursday, March 29, 2018 at 12:00 noon. See <https://fultonchair.byu.edu/Pages/dates.aspx> for more details, including on how to create a poster.**

Exams (3 + Final):

Exams will be approximately 75% objective (multiple choice, short answer, true/false, fill-in-the-blank) and 25% essay. All Exams will be given in-class during the first hour of class on the date indicated in the syllabus. Make sure to be on time and if missed there is no make-up without prior Professor Approval. **The final exam will be comprehensive and essay in nature.** You will be permitted to bring in to the final one 8 1/2 X 11 sheet of paper with formulas, etc. (only one sheet - however, both sides can be used).

FINAL EXAM: The final exam is comprehensive in the sense that you will be given a contemporary psychological problem and you will design the experiment(s) (including statistics, etc.) to study that problem. Knowledge of all types of experimental designs will be required to successfully answer the questions raised in the final exam. For the final exam you can bring a single sheet with notes (see Exams). **Final Exam: Thursday, December 21, 2017 11:00AM to 2:00 PM, Room 1145 SWKT (Classroom).**

Journal Critique Outline:

Following is what is expected for the 2 journal critique assignments. Please do not answer these questions by repeating back that “yes” or “no” that they do or do not meet the standard - rather concisely tell how they answered the questions so that others know you understood the research article and its results (Examples of good critiques are available on Learning Suite):

Title: Is the title appropriate for the article? Does it reflect what the article states as found in the study? Is it informative rather than “cute”? Make sure to type out the title in full at the top of the page in APA format including all information, i.e., authors, year, title, journal name, and page numbers.

Abstract: The abstract should be concise and describe all the pertinent findings of the study. Make sure what is said in the abstract is actually what was found in the study. Have the authors embellished their findings or overstated their results in anyway? The abstract is important because this may be all that most readers look at.

Introduction: The introduction should provide an adequate review of the topic area and the rationale for the study. There should be some statement as to the hypotheses being studied and what the expected findings might be. There should be some statement or inference as to why this is an important study to do. There should be ample and current citations of appropriate research literature to support the research hypotheses. Tell in your own words what this research is about.

Methods: In most articles the Methods section and the manner in which the results were analyzed and/or interpreted are typically the areas where the greatest criticisms can be registered. In the Methods section one should carefully examine the types of subjects utilized, what kind of variables were manipulated and whether there are extraneous factors that could have affected the subjects performance other than the independent and dependent variables under study. How rigorous were experimental controls utilized? How homogeneous or heterogeneous were the various subject groups under

study? Are there age, size, sex, experience, or other variables that might explain the findings? What type of experimental design was utilized?

Results: Check and make sure that the experimental design utilized is, in fact, appropriate for the statistics used. If the appropriate data is present, check some of the calculations. How descriptive are the statistics? In most journals interpretation of results is reserved for the discussion section, so be sure you check the discussion section to ensure that the results have been interpreted properly. How are the results written up? Can you understand them? What do you understand the authors found?

Discussion: In this section there should be a complete integration between all the above sections and the results, and their significance, should be discussed fully. What is the real significance of this article? Did the study really find/discover what it set out to do, or is the author presenting an apologetic smokescreen? What about the real implications of the study, are they all addressed? Did the author critique the study and point out potential weaknesses or were these glossed over?

References: Go to the library or online and check a couple of the references. Did the author cite the article properly and accurately reflect the findings? How current are the references? How much does the author cite his/her own research?

Point Breakdown

Assignments	Points
Exams 1, 2 + 3 = 100 pts each	300
Final Exam	200
Critiques 1 + 2 = 35 pts each	70
Critique 3	40
Experiment Write-up #1	100
Experiment Write-up #2	150
IRB Approval for Final Project & Paper	50
Oral Presentation of Final Project & Paper	90
Paper of Final Project & Paper -	150
Total Points	1150

Course Schedule*

Date	Topics	Assignments
M – Sept 11	Intro to Class – In class experiment data acquisition	(Readings: Part I, Part II, Statistics Review [pp. 441 – 486], Presenting Results [pp. 487 – 521]).
M – Sept 18	In Class Experiments and Discussion of Readings	(Readings: Part I, Part II, Statistics Review [pp. 441 – 486], Presenting Results [pp. 487 – 521]).
M - Sept 25	Exam I – (In classroom 1st hour on Parts I and II, Statistics and Presenting Results, and lecture)	(Readings: Part III, Part IV)

Lecture: IRB, CITI Training

M – Oct 2	Lecture on Readings: Part III, Part IV	CITI Training (BYU) Certificate DUE (Readings: Part III, Part IV)
M – Oct 9	Lecture on Readings: Part III, Part IV	JOURNAL ARTICLE CRITIQUE #1 DUE
M - Oct 16	Lecture on Readings: Part III, Part IV	IN-CLASS EXPERIMENT WRITE-UP #1 DUE
M - Oct 23	Lecture on Readings: Part III, Part IV	FYI-Thursday, October 26, 2017- ORCA Grant - Student Application Deadline
M - Oct 30	EXAM 2 – (In classroom 1st Hour-on Readings: Parts III and IV) Lecture and writing paper help- EndNote.	(FYI- Thursday, November 2, 2017- ORCA Grant Mentor Endorsement Deadline)
M – Nov 6	Lecture on Readings: Parts V & VI	JOURNAL ARTICLE CRITIQUE #1 DUE- (FYI—Monday, November 7 - Monday, November 14, 2017 Colleges Assign Reviewers in ORCA Grant System)
M – Nov 13	Lecture on Readings: Part V & VI	IN-CLASS EXPERIMENT WRITE-UP #2 DUE
M - Nov 20 [Thanksgiving Week]	Exam 3 – (In Classroom- 1st Hour-on Readings: Part V & VI) Work on Final Paper	
M - Nov 27	Presenting Results (pp. 487 - 506) and preparing for the Spring 2018 Mary Lou Fulton Research Conference BYU	FYI only- Friday, December 1, 2017.ORCA Reviews due from Colleges.(Friday, February 2, 2018 ORCAs Announced.
M – Dec 4	Oral Presentations	

Th – Dec 21, 2017 **FINAL EXAM - PSYCH 310- Sec 006**
11:00 AM – 2:00PM
1145 SWKT (Classroom)

*NOTE: THIS IS A LIVING (DRAFT) DOCUMENT AND SUBJECT TO CHANGE AS CLASS UNFOLDS!

Librarian Information

Name: Emily Swensen Darowski, PhD
Dept: Social Sciences/Education Department
Office: 1210 [HBLL](#)
Phone Number: 422-6346
Email: emily_darowski@byu.edu

Reference Desk Information

Name: Social Sciences / Education
Phone Number: 422-6228
Email: social_science@byu.edu
Hours: M-Th : 8am-9pm; F: 8am-6pm; Sat: 10am-6pm

HBLL Department Research Information Contacts*

Connie Lamb: Connie Lamb: Anthropology, Middle East Studies, Women's Studies
Andy Spackman: Business, Economics
Leticia Camacho: Management and Accounting
Emily Darowski: Psychology
Brian Champion: Political Science, Economics, Government documents
Albert Winkler: History
Quinn Galbraith: Sociology, Family Studies, Social Work
Brian Wages: Reference Specialist

go to lib.byu.edu and then type in the name for their webpage with resources and contact info

E-reserve Information: Type in a title of a book or article in the lib.byu.edu website there is a request option that will allow you to reserve item requested if not available)

Inter-library loan: Check with library on how to get for free.

Other Information: Copyright: Check with BYU Copyright Licensing Office <https://sites.lib.byu.edu/copyright/>

Bibliography Software: Refworks. Free on-line see "HBLL Frequently Asked Questions":

Endnote: (same) see <http://ask.lib.byu.edu/a.php?qid=1127891>

Other Information

BYU Honor Code

In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation, and my own expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

Preventing Sexual Discrimination and Harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education. Title IX covers discrimination in programs, admissions, activities, and student-to-student sexual harassment. BYU's policy against sexual harassment extends not only to employees of the university, but to students as well. If you encounter unlawful sexual harassment or gender-based discrimination, please talk to your professor; contact the Equal Employment Office at 422-5895 or 367-5689 (24-hours); or contact the Honor Code Office at 422-2847.

Students with Disabilities

Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete this course successfully, please contact the Services for Students with Disabilities Office (422-2767). Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. Services are coordinated with the student and instructor by the SSD Office. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures by contacting the Equal Employment Office at 422-5895, D-285 ASB.

Academic Honesty Policy

The first injunction of the BYU Honor Code is the call to be honest. Students come to the university not only to improve their minds, gain knowledge, and develop skills that will assist them in their life's work, but also to build character. President David O. McKay taught that 'character is the highest aim of education' (The Aims of a BYU Education, p. 6). It is the purpose of the BYU Academic Honesty Policy to assist in fulfilling that aim. BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including but not limited to plagiarism, fabrication or falsification, cheating, and other academic misconduct.

Plagiarism Policy

Writing submitted for credit at BYU must consist of the student's own ideas presented in sentences and paragraphs of his or her own construction. The work of other writers or speakers may be included when appropriate (as in a research paper or book review), but such material must support the student's own work (not substitute for it) and must be clearly identified by appropriate introduction and punctuation and by footnoting or other standard referencing.

Respectful Environment Policy

"Sadly, from time to time, we do hear reports of those who are at best insensitive and at worst insulting in their comments to and about others... We hear derogatory and sometimes even defamatory comments about those with different political, athletic, or ethnic views or experiences. Such behavior is completely out of place at BYU, and I enlist the aid of all to monitor carefully and, if necessary, correct any such that might occur here, however inadvertent or unintentional."

"I worry particularly about demeaning comments made about the career or major choices of women or men either directly or about members of the BYU community generally. We must remember that personal agency is a fundamental principle and that none of us has the right or option to criticize the lawful choices of another." *President Cecil O. Samuelson, Annual University Conference, August 24, 2010*

"Occasionally, we ... hear reports that our female faculty feel disrespected, especially by students, for choosing to work at BYU, even though each one has been approved by the BYU Board of Trustees. Brothers and sisters, these things ought not to be. Not here. Not at a university that shares a constitution with the School of the Prophets." *Vice President John S. Tanner, Annual University Conference, August 24, 2010*

Devotional and Forum Attendance Policy

Brigham Young University's devotional and forum assemblies are an important part of your BYU experience. As Elder Dallin H. Oaks stated, 'You neglect your education and fail to use a unique resource of this university if you miss a single one' (from the address 'Challenges for the Year Ahead', 6 September, 1973). Your attendance at each forum and devotional is strongly encouraged.



The FHSS Writing Lab has MOVED!

Where are we now? 1175 JFSB (we traded places with the Humanities Advisement Center) We are in the northeast corner of the main floor of the JFSB

How have past problems been resolved? Winter 2017 semester was a challenging one for us! Three newly hired advisors changed their minds at the last minute about working in the Lab, and we were never able to replace them in the unique schedules. This resulted in many students being unable to make appointments. In spite of the scheduling problems, we served more students with fewer writing advisors than in any other semester.

We have hired new advisors and will now have more advisors for every hour so there will be more options for signing up for Writing Lab appointments.

What is new? We have a greater variety of advisors majoring in FHSS disciplines, and we will continue to send weekly emails to inform you of your students' visits to the Writing Lab.

Why send my students when I still had student papers riddled with errors? Occasionally, someone complains that the student papers were not improved after students visited the Writing Lab. You may find that one or more of these insights contributed to poor student papers:

- Students may not make any of the revisions that were discussed in the Writing Lab visit. (One way to address this is to have students write a half-page memo telling you what was discussed in the visit and how students revised their papers as a result.)
- Writing Lab advisors seek to help students with the most global issues first. So even if a paper is riddled with grammar, punctuation, and style errors, the advising session may be spent helping a student create a thesis to guide the organization of the paper. The student may be encouraged to return for additional help, but may choose not to come.
- Students often come to the Writing Lab the hour before the paper is due. They want credit for coming to the Lab, but there may not be enough time to make any actual revisions.

What help is offered to students taking the new Semester Online courses? All students taking Semester Online courses that are still present on campus must come in person to the Writing Lab. However, if you have some students who are taking the class from a distance, we can do online appointments with students.

FHSS Writing Lab

1175 JFSB 801-422-4454 ★ <https://fhsswriting.byu.edu/Pages/Home.aspx> ★ fhss-writinglab@byu.edu

Faculty Supervisor: Joyce Adams (422-8168) ★ **Student Lab Manager:** Spencer (422-4454)