EDUC/PSY 6570 - Online
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Introduction to Educational and Psychological Research
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Spring Semester 2018
Online Course

Professor: Joshua D. Marquit, Ph.D.
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Cell Phone Number: (610) 570-4422 (You're also welcome to text me with questions or concerns.)
Contact Policy: I am accessible to my students by email, text, phone, through Canvas, or online audio or video conferencing (e.g., Adobe Connect).

Canvas: Please check Canvas each day for course updates, announcements, assignments, quizzes, and grades.

Required Reading Materials
- Johnson, R.B. & Christensen, L. (2017). *Educational Research: Quantitative, Qualitative, and Mixed Approaches* (6th Ed.). California: Sage.
    - ISBN-13: 9781483391601

Additional Readings: Additional readings will be assigned throughout the semester and will be available via Canvas in PDF format.

Course Description and Content: This course is designed to introduce graduate students to the information and skills needed to critique, synthesize, conduct, and report research in psychology, human development, education, health and medicine, and other sciences. This course will provide you with an opportunity to further refine your critical thinking, analytical, and research skills as you work through the process of writing a research prospectus that adheres to APA-formatting guidelines. This research prospectus will be an appropriate first step in writing your thesis or dissertation proposal.

Substantial reading assignments will be given each week, and students will be expected to read them thoroughly. Students will also have a variety of practical hands-on experiences and activities designed to master the course material.

Course Objectives: The objectives for PSY/EDUC 6570 have been agreed upon by the department heads in the College of Education. By the end of the course, the student will be able to do the following:

1. Use the reference area of the library, interlibrary loan services, and computerized databases to locate relevant articles and documents on a selected topic.
2. Conduct a systematic review of the literature for the purposes of (a) identifying research questions related to a student-selected topic, (b) describing the strengths and weaknesses in studies on the topic, and (c) delineating methodological issues to be resolved in designing a study in the area of the student's topic. These skills will include the ability to:

    a. Examine and critique previous reviews.
    b. Write an introduction for the review.
    c. Write objectives for the review.
    d. Obtain reports of studies to be reviewed.
    e. Develop a coding instrument for coding the studies.
    f. Collect data from reports systematically.
    g. Analyze collected data.
    h. Interpret and report results.
    i. Write a problem statement, from the results of the review, for a future study.
3. Use APA and USU Publication Guide for Graduate Students when writing a literature review.
4. Describe the elements of a research proposal.
5. Describe the relationships among hypotheses, measures, and analysis procedures in a research proposal.
6. Define the major threats to the internal and external validity of an experiment.
7. Critically read published empirical studies to:
    a. Identify authors' research questions or objectives.
    b. Specify authors' conclusions.
    c. Identify the major threats to internal validity and discuss the validity of the authors' conclusions in light of those threats.
    d. Suggest improvements in the design of critiqued studies to remedy the perceived threats to internal or external validity.
8. Define target and accessible populations and explain the importance of both random sampling and random assignment in-group experimental designs.
9. Define and assess independent as well as dependent variables.
10. Understand the issues related to collecting research data using tests, questionnaires, interviews, observation, and content analyses.
11. Understand test validity and reliability and the importance of those concepts when conducting research.
12. Understand the differences among nominal, ordinal, interval, and ratio data and how these differences influence the selection of appropriate statistical procedures.
13. Understand the differences between descriptive and inferential statistics.
14. Understand the difference between statistical and practical significance including:
    a. The meaning of statistical significance.
    b. Measures of Effect Size.
15. Describe the methods and tools of:
    a. Causal-comparative and descriptive research designs.
    b. Correlational research designs.
    c. Factorial, experimental, quasi-experimental, and pre-experimental research designs.
    d. Single-subject research designs.
    e. Case study methods.
    f. Qualitative research methods.
16. Understand the ethical, legal, and human relations issues in educational/psychological research.

These objectives will be accomplished through course readings, online discussions, writing assignments, quizzes, and a research prospectus.

Grading and Evaluation: There are 335 points possible in this course. Your grade for this course will be calculated as detailed below.

Percentage	Grade
93 - 100	A
90 - 92.99	A-
87 - 89.99	B+
83 - 86.99	B
80 - 82.99	B-
77 - 79.99	C+
73 - 76.99	C
70 - 72.99	C-
67 - 69.99	D+
63 - 66.99	D
0 - 62.99	F

Evaluation Activity	Points
Quizzes	**100**
Research Prospectus Writing Assignments	
Assignment #1: Research Topic	**10**
Assignment #2: Literature Review Plan	**10**
Assignment #3: Coding Sheet	**10**
Assignment #4: Coding Table – Articles #1 and #2	**10**
Assignment #4: Coding Table – Articles #3 to #10	**40**
Assignment #5: Problem Statement Syllogism	**15**
Assignment #6: Research Questions	**5**
Assignment #7: Methods and Data Analysis Section	**15**
Assignment #8: Final Research Prospectus (includes final draft of your research questions, problem statement, literature review plan, systematic literature review, methods and data analysis section, and reference page).	**100**
Other Assignments	
Experimental Validity Assignment	**10**
Article Critique	**10**
Total Points	**335**

Quizzes: There will be 10 quizzes throughout the semester. Each quiz will consist of both multiple-choice and true/false questions. Questions will be created from class reading materials. Each quiz will be worth 10 points. Quizzes are posted on Canvas and open-book. You'll have 20 minutes to complete each quiz. There will be no make-up quizzes, except in the case of a properly documented, university-approved, emergency.

Research Prospectus Writing Assignments: The major aim of this course is to provide students with an opportunity to develop a research prospectus that will function as the foundation of their thesis or dissertation proposals. The prospectus writing assignments will be broken into smaller, more manageable tasks listed below:
- Assignment #1: Research Topic
- Assignment #2: Literature Review Plan
- Assignment #3: Coding Sheet
- Assignment #4: Coding Table
  - Articles #1 – #2
  - Articles #3 – #10
- Assignment #5: Problem Statement Syllogism

- Assignment #6: Research Questions
- Assignment #7: Methods and Data Analysis Section
- Assignment #8: Final Research Prospectus

To guide you through the process of writing your research prospectus, we will discuss, during a Weekly Online Discussions on Adobe Connect, the instructions for each writing prospectus assignment, and review/critique assignment examples from previous students. To help you further hone your writing abilities, I will provide you with detailed feedback and suggestions on your writing assignments (only Assignments #1-7) and allow you to revise and resubmit your work once to improve your grades. Typically, you will have a week to resubmit your work from the day that I grade and return it to you.

Other Assignments:
1. **Experimental Validity Assignment**
2. **Article Critique**

Late Assignments will receive an immediate half-point deduction and will only be accepted within a day (or 24 hours) after the assignment was due, except in the case of a properly documented, university-approved, emergency. In the case of a properly documented, university-approved, emergency, students must contact me and make necessary arrangements to submit their assignment at a later date.

Other Course Activities:
1. **Learning Modules:** Learning Modules have been created for each week of the semester and are accessible to students on Canvas. Please check the Learning Module at the beginning of each week, as it will help guide you through the course material and assignments. Each Learning Module will also include lecture notes, assignment instructions, and other useful course information.
2. **Weekly Online Discussions on Adobe Connect:** Each week we will hold online discussions on Adobe Connect (on Canvas). This time will be used to discuss course readings and writing assignments, receive additional feedback on your assignments, and to address questions about course content. You are not required to attend every online discussion, but I ask that you attend at least once a month so you can receive information on specific course-related activities and prospectus writing assignments (i.e., course introductions, coding sheet and table, problem statement syllogism, research questions, methods and data analysis section, and final research prospectus assignments). During the first week of the semester, we will schedule a time to hold our weekly online discussions using a *Doodle Poll*.

Students with Disabilities: Qualified students with physical, sensory, emotional, or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advanced notice.

Academic Integrity and Honesty: Plagiarizing, cheating, or violating other reasonable standards of behavior will not be tolerated. Cheating includes such behaviors as using or providing others with unauthorized information, materials, or study aids in any academic exercise or activity, substitution for

another student or permitting another student to substitute for oneself in taking an examination or in preparing work. Further, any talking during in the Testing Center will be considered cheating too. Any student who engages in academically dishonest behavior will receive a zero for the course grade. All incidents of cheating will be reported for university-level disciplinary proceedings the results of which can include probation, suspension, expulsion, the assignment of HV (honors violation) to the student's permanent transcript, etc.

Changes to Assignments and Schedule: The instructor reserves the right to make changes to this syllabus. Potential changes will be discussed with student(s), agreed upon collectively, and a revised syllabus or announcement that reflects these agreed upon changes will be posted on Canvas.

Tentative Course Schedule:

Month	Week	Date	Reading Assignments	Assignments and Quizzes
Jan.	1	8-13	- Course Syllabus	- Introduce yourself on Canvas - Briefly meet with the Instructor on Adobe Connect or on the phone to discuss course syllabus, objectives, and assignments.
Jan.	2	14-20	- Chapters 1 & 2 - Lecture Notes 1 & 2	- Quiz #1: Chapters 1 & 2
Jan.	3	21-27	- Chapters 4 & 5 - Lecture Notes 4 & 5 - Systematic Review of the Literature Lecture	- Quiz #2: Chapters 4 & 5 - Assignment #1: Research Topic
Jan. – Feb.	4	28-3	- Chapters 3 & 6 - Lecture Notes 3 & 6	- Quiz #3: Chapters 3 & 6 - Assignment #2: Literature Review Plan
Feb.	5	4-10	- Chapters 11 & 12 - Lecture Notes 11 & 12	- Quiz #4: Chapters 11 & 12 - Experimental Validity Assignment
Feb.	6	11-17	- Chapters 13 & 14 - Lecture Notes 13 & 14	- Quiz #5: Chapters 13 & 14 - Assignment #3: Coding Sheet - Begin working on collecting, reading, and coding peer-reviewed research articles for your Coding Table Assignment.
Feb.	7	18-24	- Chapters 7 & 8 - Lecture Notes 7 & 8	- Quiz #6: Chapters 7 & 8 - Article Critique #1 - Continue working on collecting, reading, and coding peer-reviewed research articles for your Coding Table Assignment.
Feb. – Mar.	8	25-3	- Chapters 9 & 10 - Lecture Notes 9 & 10 - Final Research Prospectus Layout	- Quiz #7: Chapters 9 & 10 - Assignment #4: Coding Table – Articles #1 and #2 - Continue working on collecting, reading, and coding peer-reviewed research articles for your Coding Table Assignment.
Mar.	9	4-10		- Continue working on collecting, reading, and coding peer-reviewed research articles for your Coding Table Assignment.
Mar.	10	11-17	- Chapters 15 & 16 - Lecture Notes 15 & 16	- Quiz #8: Chapters 15 & 16 - Continue working on collecting, reading, and coding peer-reviewed research articles for your Coding Table Assignment
Mar.	11	18-24	- Chapters 17 & 20 - Lecture Notes 17 & 20	- Quiz #9: Chapters 17 & 20 - Assignment #4: Coding Table – Articles #3 to #10
Mar.	12	25-31	- Chapters 18 & 19 - Lecture Notes 18 & 19 - Statistics Review - Problem Statement Syllogism Lecture	- Quiz #10: Chapters 18 & 19 - Assignment #5: Problem Statement Syllogism
Apr.	13	1-7		- Assignment #6: Research Questions
Apr.	14	8-14	- Research Prospectus Examples - Final Research Prospectus Layout	- Assignment #7: Methods and Data Analysis Section
Apr.	15	15-21	- Research Prospectus Examples	
Apr.	16	22-28	- Research Prospectus Examples	
Apr. – May	16	29-4	- Final Examinations Week	- Assignment #8: Final Research Prospectus

Research Prospectus Layout: minimum of 10 pages of content plus a title page and references.
1. Title page
2. Introduction
   A. Problem Statement Syllogism (approximately 1–1.5 pages)
      i. Research background – describe the state of the research literature in general terms.
      ii. Identify the gaps in the current research literature.
      iii. Identify the benefits of conducting additional research to address these gaps.
      iv. Briefly describe your proposed research project that will address these gaps.
   B. The research questions to be investigated by implementing your proposed research project.
3. Review of Literature (approximately 6–8 pages)
   A. Short summary of the introduction above including additional information on the gaps in the current research literature identified earlier in the problem statement.
   B. Review objectives
      i. To describe the current state of the research literature on…
      ii. To discuss issues, strengths, and weaknesses in previous research.
      iii. To draw conclusions based on this information from which the research questions and strategies for this proposed research study were formulated.
   C. Review procedures
      i. Online databases searched.
      ii. Keywords and keyword combinations used.
      iii. Inclusion/exclusion criteria – how many articles met these criteria and were included in the systematic review?
   D. Review discussion
      i. Describe how your systematic review was conducted. Be sure to include information on your coding sheet and the variables that were coded and reported in your coding table.
      ii. Split systematic review into three sections:
         1. Sample Characteristics
         2. Research Design Characteristics
         3. Research Outcomes
      iii. For each of these three sections, you will analyze and summarize each coded variable from your Coding Table assignment.
         1. What is the data on each variable?
         2. Why is that variable and findings important?
         3. What should future research consider (i.e., how to address gaps and build on strengths in current research literature)? Recommendations?
      iv. Conclusion paragraph
         1. Synthesize the systematic review of primary articles by discussing generally what the strengths and weaknesses (gaps) are in the current research literature.
         2. Identify what type of study should be conducted next (or what your proposed study will be) to address the weaknesses (gaps) in the current research literature.
4. Methods (approximately 2–4 pages)
   A. Research Design
      i. Briefly describe the research design and the purpose of the study.
   B. Participants/Subjects
      i. Describe the:
         1. Basic characteristics of the participants/subjects

            a. # of participants/subjects, age range, and other research-specific characteristics.
      2. Study location
      3. Sampling technique

C. Study Variables
    i. Independent variable(s) (if applicable)
    ii. Dependent variable(s)

D. Materials
    i. Recruitment materials including emails, flyers, incentives, and announcements.
      1. Briefly describe what information will be included in the recruitment materials.
    ii. Informed consent forms
      1. Briefly describe what information will be included in the informed consent form.
    iii. Measures including surveys, questionnaires, interviews, and other instruments.
      1. Briefly describe any data collection material here.
    iv. Software including data collection platforms, data analysis programs, and other research-related programs.
      1. Briefly describe the software that you will be using to collect, store, manage, and analyze your data.
    v. Hardware including computers and other types of research apparatus.
      1. Briefly describe the hardware that you will be using to collect your data.

E. Procedures
    i. Describe how you will gain access to your participants, recruitment and sampling techniques, how you will collect data, and conduct the experiment (e.g., treatments and/or manipulations).

F. Data Analysis
    i. List each of your research questions or hypotheses here.
    ii. Describe which data will be used to answer each research question.
    iii. Describe what type of research analyses will be used to answer each research question.
      1. Include any descriptive and inferential statistics; and graphical representations of the data that will be used.

5. References