EAB 6719: Strategies & Tactics of Behavioral Research
Syllabus, Fall 2023

General Information
Instructor: Nicole Gravina (339 Psych Bldg)
Contact: ngravina@ufl.edu (email)
Class meetings: Mondays, PSY 191, 12:50 pm to 3:50 pm
Office hours: Tuesdays 9-10 and by appointment (email me to schedule a meeting)

Course Content
This is a course on research methods in applied behavior analysis.

Objectives
As a result of completing this seminar, students will be able to:
1. Describe the key characteristics that distinguish "group-comparison" from "single-subject" experimental designs.
2. Define the concepts of internal and external validity, including threats to validity and their controls.
3. Describe commonly used variations of traditional group-comparison designs
4. Describe the dimensions of behavior typically used as dependent variables and methods for measuring these dimensions.
5. Define the concept of "measurement reliability" (interobserver agreement) and describe methods for its assessment.
6. Recognize the importance of collecting demographic information, describe the types of demographic information that are most relevant based on the research, and identify acceptable methods to collect it.
7. Describe community participatory research and how it can be included in single subject research.
8. Describe the key components of the reversal, multiple baseline, multielement, and changing criterion designs, including strengths and limitations of each.
9. Describe methods for conducting parametric, comparative and component analyses.
10. Identify the basic components of a graph, describe the types of changes in graphed data that are evaluated during the course of an experiment, and describe methods used for evaluating between-condition changes in graphed behavioral data.
11. Describe the concept of social validity, the aspects of research for which social validity might be examined, common methods for assessing social validity, and the strengths and limitations of social-validity measures.
12. Describe the replication crisis and ways single-subject designs protect against it, and could still be affected, as well as potential solutions.

Readings
Course material will be drawn from two sources:
- Text. Numerous texts have been published on experimental methods, both generally and within the field of applied behavior analysis. I selected one primary text that commonly is used in seminars of this type (see below).
- Journal articles and chapters (see class schedule for listing).

Text
Kazdin, A. E. (2020). Single-case research designs: Methods for clinical and applied settings (3rd Ed.). New York: Oxford University Press.

Format

This course will be taught at a graduate level and conducted in a seminar format. Most class meetings will consist of lectures and group discussions of the material as well as practical activities/exercises. Students are expected to contribute to each discussion.

Class attendance and assignments

You are expected to attend all classes in order to participate in discussions. If you are absent for a class, your make up assignment will be to complete any in-class assignments and summarize readings. If you will miss several classes (e.g., illness, family emergency), please contact me, and we will develop a reasonable accommodation.

In-Class Assignments: In class we will complete practice assignments (e.g., graphing) and in some cases, you will upload them to canvas for credit.

Reading Guides: I will supply readings guides with questions on Canvas. You will upload your completed guide before class each week.

Exams: There will be two exams during the semester that will consist or multiple choice and short answer questions. Exams will be taken in-class on Canvas. Exam 1 will cover the first half of the semester readings and lectures and exam 2 will cover the second half.

Research Ideas Assignment: For this assignment, you will generate three, independent research ideas. We will refine these ideas throughout the semester and you will submit your final research ideas near the end of the semester.

Grading

- Final grades will be based on exam performance, assignments, and in-class participation.

Grade	Percentage
A	92%+
A-	90-91.9%
B+	88-89.9%
B	82-87.9%
B-	80-81.9%
C+	78-79.9% and so on

University policies (taken from UF guidelines)

- **Special Accommodations:** Every effort will be made to show consideration to all students and to create a classroom environment in which students feel that their contributions are valued. Students requesting special accommodation must first register with the Dean of Students Office, which will provide documentation that the student must give to me when requesting accommodation. All properly requested accommodations will be granted discreetly. If other special circumstances should arise during the term, please contact me directly and as soon as possible.

- **Academic Honesty:** UF students are bound by The Honor Pledge, which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

- **Sexual Harassment:** UF fosters a campus free of sexual harassment, which is a violation of state and federal laws as well as of the policies and regulations of the university. All UF employees and students must adhere to UF's sexual harassment policy, which can be found at: https://hr.ufl.edu/forms-policies/policies-managers/sexual-harassment/. Please review this policy and contact a university official if you have any questions. University employees (e.g., administrators, managers, supervisors, faculty, teaching assistants, staff) are required to report knowledge of sexual harassment to UF's Title IX coordinator. For more information about UF's Title IX office see: https://titleix.ufl.edu/. You can also complete a Sexual Harassment Report online (Title IX) at: https://titleix.ufl.edu/title-ix-reporting-form/.
- **Absence from Class:** Absences due to illness or observance of religious holidays should be communicated to the instructor. Requirements for class attendance, make up exams, assignments, and other work in this class are consistent with university policies that can be found at http://handbook.aa.ufl.edu/policies.aspx
- **Course Evaluations:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

Schedule (subject to change at instructor's discretion)

Date	Topics	Readings and Assignments
Aug 28	Introduction to the course Introduction to experimental design logic Identifying research questions	**Recommended, Not Required** Subramanyam (2013) – Art of Reading a Research Article - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3687192/ Kazdin Chapter 1
Sept 4	Labor Day	No class
Sept 11	Experimental design logic Validity Literature searches and literature reviews	**Required Readings** Kazdin Chapter 2 King et al. (2020). Search and selection procedures of literature reviews in behavior analysis. *Perspectives on Behavior Science, 43*(4), 725-706. https://www.doi.org/10.1007/s40614-020-00265-9
Sept 18	Research Brainstorming	**Assignment:** Research Ideas
Sept 25	Measurement Participant considerations and reporting demographics	**Required Readings:** Kazdin 3-4 Wirth, O., Slaven, J., & Taylor, M. A. (2014). Interval sampling methods and measurement error: A computer simulation. *Journal of Applied Behavior Analysis, 47*, 83-100.

		Jones, S. H., St. Peter, C. C., & Ruckle, M. M. (2020). Reporting of demographic variables in the Journal of Applied Behavior Analysis. *Journal of Applied Behavior Analysis, 53*(3), 1304-1315. **Recommended Reading:** Nastasi, J. A., Crowe, A., & Gravina, N. (2022). Reporting demographic variables in *JOBM* and *JAP*: A comparison and call to action. *Journal of Organizational Behavior Management*. Advanced online publication. https://doi.org/10.1080/01608061.2022.2082624
Oct 2	Reliability of measurement IOA Treatment integrity	**Required Readings** Kazdin 5 Vollmer, T. R., Sloman, K. N., & St. Peter Pipkin, C. (2008). Practical implications of data reliability and treatment integrity monitoring. *Behavior Analysis in Practice, 1*(2), 4-11. Jones, S. H. & St. Peter, C. C. (2022). Nominally acceptable integrity failures negatively affect interventions involving intermittent reinforcement. *Journal of Applied Behavior Analysis, 5*5(4), 1109-1123.
Oct 9	Introduction to SS Designs Reversal Designs Multi-element Designs	**Required Readings:** Kazdin 6 & 9 **Recommended Reading:** Dallery, J., Cassidy, R. N., & Raiff, B. R. (2013). Single-case experimental designs to evaluate novel technology-based health interventions. Journal of Medical Internet Research, 15(2), e22. 10.2196/jmir.2227 **Assignment:** Bring an example of a reversal and an example of a multi-element design from the behavior analysis literature to discuss in class. It is expected that you have read the paper and can explain it.
Oct 16	Multiple Baseline Designs Changing Criterion Designs	**Required Readings:** Kazdin 7-8 Horner, R. D., & Baer, D. M. (1978). Multiple-probe technique: A variation of the multiple baseline. *Journal of Applied Behavior Analysis, 11*, 189-196. **Recommended Reading:** Watson, P.J., & Workman, E.A. (1981). The nonconcurrent multiple-baseline across individuals design: An extension of the traditional multiple baseline design. *Journal of Behavior Therapy and Experimental Psychiatry, 12,* 257-259. **Assignment:** Bring an example of a multiple baseline and an example of a changing criterion design from the behavior analysis literature to

		discuss in class. It is expected that you have read the paper and can explain it.
Oct 23	Graphing Visual inspection	**Required Readings** Cooper, J. O., Heron, T. E., & Heward, W. L. (2020). *Applied behavior analysis* (3 ed.). Hoboken, NJ: Pearson. Chapter 6. Constructing and interpreting graphic displays of behavioral data (pp. 124-154). Kazdin Chapter 13
Oct 30	Exam 1 Design Standards	**EXAM 1** **Required Readings:** Kazdin 16 Kratochwill, T. R., et al. (2023). Single-case intervention research design standards: Additional proposed upgrades and future directions. Journal of School Psychology, 97, 192-216. https://pubmed.ncbi.nlm.nih.gov/36914365/ **Recommended Reading:** Tanious R., & Onghena, P. (2021). A systemic review of applied single-case research published between 2016 and 2018: Study designs, randomization, data aspects, and data analysis. Behavior Research Methods, 53, 1371-1384. What Works Clearinghouse (2014). What Works Clearinghouse: Procedures and standards handbook (version 3.0). *Washington, DC: Institute of Education Sciences, US Department of Education*. Appendix E. Document on which Kratochwill et al. (2013) was based, 1.0 very similar to 3.0
Nov 6	Social Validity Community Participatory Research	**Required Readings:** Kazdin 15 Wolf. M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*(2), 203-214. Pritchett, M., Al'i-Rosales, S., Re Cruz, A., & Cihon, T. M. (2021). Social justice is the spirit and aim of an applied science of human behavior: Moving from colonial to participatory research practice. *Behavior Analysis in Practice, 15*(4), 1074-1092. **Recommended, Not Required:**

		Fuqua, R. W. & Schwade, J. (1986). *Social validation of applied behavioral research.* Poliing, A., Fuqua, R. W. (eds.). Research Methods in Applied Behavior Analysis. Springer. Pp 265-292.
Nov 13	Qualitative Methods	**Required Readings:** Burney, V., Arnold-Saritepe, A., McCann, C. M. (2023). Rethinking the place of qualitative methods in behavior analysis. *Perspectives on Behavior Science, 46*, 185-2000. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.
Nov 20	Research Training Collaboration	**Required Readings:** Malott, R. W. (1992). Should we train applied behavior analysts to be researchers? *Journal of Applied Behavior Analysis, 25*, 83-88. Baer, D. M. (1992). Teacher proposes, student disposes. *Journal of Applied Behavior Analysis, 25*, 89-92. Reid, D. H. (1992). The need to train more behavior analysts to be better applied researchers. *Journal of Applied Behavior Analysis, 25*, 97-99. Malott, R. W. (1992). Follow-up commentary on training behavior analysts. *Journal of Applied Behavior Analysis, 25*, 513-515.
Nov 27	Open Science Replication Crisis	**Required Readings:** Tincani, M., & Travers, J. (2019). Replication research, publication bias, and applied behavior analysis. *Perspectives on Behavior Science, 42*(1), 59-75. Gilroy, S. P., & Kaplan, B. A. (2019). Furthering open science in behavior analysis: An introduction and tutorial for using GitHub in research. *Perspective on Behavior Science, 42*(3), 565-581. **Recommended, Not Required:** Boyce, V., Mathur, M., & Frank, M. C. (2023). Eleven years of student replication projects provide evidence on the correlates of replicability in psychology. 10.31234/osf.io/dpyn6 **Assignment:** Final Research Ideas Due
Dec 4	**Exam 2** Manuscript Review Process	**Exam 2**