

## IPSA Online Summer School on Research Methods, Antalya 2022

### “Experimental Research Design in Social Sciences”

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(First draft)

**Course Description:** Experimentation is one of the basic methods to produce scientific knowledge and measurements. It is used extensively in physical as well as social sciences to establish causal relationships among factors that change in synchrony in the natural or theoretically significant counter-factual environments. However, experimentation is generally harder in social sciences than in physical sciences since social scientists often deal with complex, often unobserved, psychological, social, and political states that are difficult to identify and define, as well as difficult to measure, quantify, and replicate. This course focuses on experimental methodologies that are being used in social sciences, with particular emphasis on that the knowledge produced through experimentation is reliable, valid, and reproducible. The course is introductory; knowledge in basic research methods, e.g., development of a research question and hypotheses, and graduate level statistics course, e.g., knowledge on analysis of variance techniques, would be beneficial but not required. We will cover basic experimental designs in the morning sessions in lecture format and design experiments during practice sessions in the afternoon. There will generally be illustration of one laboratory and one field experiment for each design type. Participants are thus encouraged to send their research questions to the instructor at the beginning of the course or earlier so that we could analyze these research questions at the appropriate discussion session to make the learning personally relevant. By the end of the course, it is aimed that participants could identify the types of research questions that could be studied experimentally, to reformulate research questions for experimentation, design experiments to produce answers that are valid and reliable, and communicate these answers together with clearly defined limitations to their generalizability.

**Schedule:**

Morning sessions are for lectures, the afternoon sessions are for discussions. Assigned readings should be done *before* the respective session.

Date	Time	Topics	Assigned Reading
Aug. 29, 2022	Morning Session	<u>Introduction to Experimental Methods:</u> Course Overview   History   Definitions   Benefits   Limitation   Basic Concepts   Writing	Seltman, Ch 1 and 2
	Afternoon Session	Practice Session 1	
Aug. 30, 2022	Morning Session	<u>Between Subjects Designs:</u> Definition   Logic   Sampling and Assignment of Participants   Measurements   Assumptions   Data Analysis	Hameleers, et al.
	Afternoon Session	Practice Session 2	
Aug. 31, 2022	Morning Session	<u>Within Subjects Designs:</u> Definition   Logic   Sampling and Assignment of Participants   Measurements   Assumptions   Data Analysis	Barlas
	Afternoon Session	Practice Session 2	
Sept. 1, 2022	Morning Session	<u>Nested and Mixed Designs:</u> Definition   Logic   Sampling and Assignment of Participants   Measurements   Assumptions   Data Analysis	Barlas
	Afternoon Session	Practice Session 4	
Sept. 2, 2022	Morning Session	<u>Block Designs:</u> Definition   Logic   Sampling and Assignment of Participants   Measurements   Assumptions   Data Analysis   Power and Sample Size	t.b.a.
	Afternoon Session	Practice Session 5	

**General Reading Recommendation:**

Seltman, H. J. (2018). Experimental Design and Analysis - [Link to the Book](#).

Hameleers, M., Boss, L., & de Vreese, C. H. (2017). "They Did It": The effects of emotionalized blame attribution in populist communication. *Communication Research*, Vol. 44(6), 870 – 900.

Barlas, S. (2003). When choices give in to temptations: Explaining the disagreement between importance measures. *Organizational Behavior and Human Decision Processes*, v. 91, no. 2, 310-321.

Fisher, K., Atkinson, Q. D., Chaudhuri, A. Experiments in Political Psychology - [Link to the Book](#)