EGAP Latin American Regional Hub

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Learning Days 13 Week Schedule, August 2023, Mexico City

Time	Monday 07	Tuesday 08	Wednesday 09	Thursday 10	Friday 11
09:00 AM - 09:15 AM	Welcome	Day 1 Recap quiz	Days 1 & 2 Recap quiz	Days 1 - 3 Recap quiz	Quiz
09:15 AM - 10:00 AM	Welcome & introductions	Randomization (+ different types of designs, include encouragement design)	Estimation/Statistical Inference, with R exercise	Threats - problems you can anticipate & design for; problems that happen despite your planning and you have to react to	Presentations
10:00 AM - 10:30 AM	Design talk 1. Why experiment? - example from real study	R session (randomize!)	Estimation/Statistical Inference, with R exercise	Exercise: presenting and interpreting results	Presentations
10:30 AM - 10:45 AM	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
10:45 AM - 11:00 AM	Design talk 1. Why experiment? - example from real study - continuation	Design talk 2. Introduce Research Design form by talking through whole study	Workshop time	Workshop time	Presentations
11:00 AM - 12:00 M	Do an experiment practicum	Design talk 2. Introduce Research Design form by talking through whole study	Workshop time	Workshop time	Presentations
12:00 M - 01:00 PM	Include - reveal T and Y, start discussion on importance of theory Confirm R is set up	Continuation of introduction of RD form (total 90 min, including morning portion)	Ethics discussion - develop version of exercise related to example or practicum; one all together with only one version; then small groups on second scenario	Design Talk 3. - working with partners; convincing them to randomize	Presentations
1:00 PM - 2:00 PM	Lunch time	Lunch time	Lunch time	Lunch time	Lunch time
02:00 PM - 02:30 PM	Causal Inference	Hypothesis Testing, followed with R exercise	Power, with R exercise	Transparency	Individual interviews
02:30 PM - 03:30 PM	Causal Inference	Workshop time	Workshop time	Workshop time	Individual interviews
03:30 PM - 04:00 PM	Workshop time: fix on randomizable T and how/what level to measure Y	Workshop time	Workshop time	Workshop time	Wrap up / Panel / Recap & closing
04:00 PM - 04:30 PM	R session	Individual interviews	Individual interviews	Individual interviews	Cultural activity
05:00 PM - 05:30 PM	Recap & closing	Recap & closing	Recap & closing	Recap & closing	Cultural activity
06:00 PM - 07:30 PM	Office hours	Office hours	Office hours	Group Dinner	Cultural activity

Agenda

Learning Days 13
Instituto Tecnológico Autónomo de México (ITAM)

Intro

This five-day meeting will consist of a combination of design clinics and teach-ins on topics critical for designing impact evaluations and field experiments intended to measure the effects of policies, interventions, and programs on policy outcomes. The focus of the workshop is on experimental methods. Teach-in topics will include randomization, statistical power, and threats to the estimation of treatment effects. Throughout the week participants will work to develop their own research designs together with peers and the teaching team.

Workshop Venue: Instituto Tecnológico Autónomo de México (ITAM), campus Av, Camino Sta. Teresa #930, Héroes de Padierna, La Magdalena Contreras, 10700. Salas ejecutivas.
Timing: The workshop starts on Monday Aug. 07th at 9AM and closes Friday Aug. 11th at 5PM

Organization: Antonella Bandiera (ITAM), Horacio Larreguy (ITAM), and Mauricio Romero (ITAM), Andrés Moya (Uniandes)

EGAP Training & Methods co-directors: Nahomi Ichino & Graeme Blair

Instructors:
Rosario Aguilar, Jake Bowers, Danilo Freire, Luis Maldonado, & Maarten Voors.

Teaching Assistant: Regina López

Study material

- Please bring a laptop. Make sure you have R and Rstudio[1] installed.
- Lectures will be based on the curriculum in The Theory and Practice of Field Experiments: An Introduction from the EGAP Learning Days by Bowers, Voors, and Ichino, which is available in both English and Spanish.
- During the workshop materials will be shared via Dropbox.

Preparation before the workshop
- Please prepare a brief (1 minute) statement to introduce yourself (who you are, where you work, what are your expectations for the Learning Days) and to present your research question and general idea of your project that you will work on during the workshop. Every participant must have a project to work on throughout the week. Ideally this is a project you are implementing, or are hoping to implement and fits closely with your research interests. During the workshop we will focus mostly on experimental methods, i.e., where an intervention (program, project) is implemented using randomization. The workshop does not focus on non-experimental methods (i.e., regression models, PSM, DD, RD, etc.). If you would like to discuss potential research project options with us in advance of the training, please send Mauricio Romero (mtromero@itam.mx) an email. We are happy to discuss!

- Make sure you have R and Rstudio installed. Appendix B of The Theory and Practice of Field Experiments: An Introduction from the EGAP Learning Days provides information on how to download R and RStudio. Please download both programs prior to the workshop and familiarize yourself with the material provided in the guide. In particular, we provide lines of code that you should execute to download several auxiliary files ("packages") that we will use during Learning Days. If you have difficulty downloading R, RStudio, or the packages, please email: Regina López rlopezpr@itam.mx for assistance.

- Complete the following pre-Learning Days assignment in R: https://goo.gl/forms/Arxye5kJEfz3bfek2. All R code is included so it should not take long to complete.
- Make sure you have access to Dropbox. The workshop material will be uploaded here.

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[1] Download from http://www.rstudio.com/products/rstudio/download/ . If you already prefer using R with an editor other than RStudio, you do not need to install RStudio.

Monday Aug. 07: Getting Started, Causal Inference & Research Design

09:00-09:30 am: Welcome (All)

09:00-09:05 AM: Welcome and Introduction, Objectives of Learning Days. EGAP LATAM Regional Hub, Director of Training & Methods, Andrés Moya

09:05-09:15 AM: Introduction of ITAM, Antonella Bandiera, Horacio Larreguy, & Mauricio Romero

09:15-09:25 AM: Introduction of EGAP, what is + types of projects Co-Directors of Training & Methods, Nahomi Ichino & Graeme Blair (zoom)

09:25-09:45 AM: Brief (1-min) introduction by participants - name, home institution, and the research question and motivation behind the research project that was submitted.

09:45-10:00 AM: Expectations for collaboration: Ask questions (when you ask questions you are helping everyone, including the professors!)

Note: It is ok to sit or stand during lectures and discussions (just not in front of other people).

10:00-10:30 am: Why experiment - example from real study

10:30-10:45 am: Coffee break

10:45-11:00 am: Why experiment - example from real study

11:00-12:00 m: Include - reveal T and Y, start discussion on importance of theory

Confirm R is set up
- Make sure you are set up with R (all)
- Hands-on session on simple statistics in R

1:00-02:00 pm: LUNCH

02:00-02:30 pm: Causal Inference
- Research questions: what are *X* and *Y*? What might it mean to say *X causes Y*?
- The potential outcomes framework and the fundamental problem of causal inference
- How do experiments help us learn about causality?

02:30-03:00 pm: Workshop time: fix on randomizable T and how/what level to measure Y
- Break in small groups
- Work on *research design form*

- Small Group discussions on research ideas: What are causal drivers and what are outcomes? By what "theory of change" or "causal mechanism" should the drivers influence the outcomes?

04:00-05:15 pm: Individual interviews

05:15-05:30 pm: Recap
- Recap
- Quick go around: what did you find useful? What would you like to hear more about?

6–730PM: Office hours (optional)
- Each participant may agree on office hours directly with an instructor, esp. on statistics

Resources
- 10 strategies for figuring out if X causes Y
- 10 things you need to know about causal inference
- R: http://www.r-project.org/
- DeclareDesign: https://declaredesign.org

Tuesday Aug. 08: Identification and Randomization

09:00-09:30 am: Day 1 Recap, Quiz

09:30-10:00 am: Randomization (+ different types of designs, include encouragement design)
- Strategies for randomization: simple, block, cluster, factorial, encouragement
- Mechanics of replicable randomization

10:00-10:30 am: R session (randomize!)

10:30-10:45 am: Coffee break

10:45-11:30 am: Introduce Research Design form by talking through whole study

1:00-02:00 pm: LUNCH

02:00-02:30 pm: Hypothesis Testing, followed with R exercise
- Fisher's test of the sharp null hypothesis of no effects and relationship with large sample tests.

02:30-04:00 pm: Design clinic: assignments and design form
- Hands-on session on statistics and hypothesis testing in R
- Work on research design form
  - Focus on strategy for hypothesis testing for each design

- Focus on randomization strategies for each design

05:00-05:15 pm: Recap
- Recap
- Quick go around: what did you find useful? What would you like to hear more about?

6–730PM: Office hours (optional)
- Each participant may agree on office hours directly with an instructor, esp. on statistics

Resources
- 10 things you need to know about randomization

Wednesday Aug. 09: Estimation of Causal Effects and Statistical Power

09:00-09:30 am: Day 1 & 2 Recap, Quiz

09:30-10:30 am: Estimation/Statistical Inference, with R exercise
- The Average Treatment Effect: Variance, standard errors, confidence intervals, sampling distributions

10:30-10:45 am: Coffee break

10:45–11:30 am: Workshop time

11:30-12:00 m: Ethics discussion - develop version of exercise related to example or practicum; one all together with only one version; then small groups on second scenario

1:00-02:00 pm: LUNCH

02:00-02:30 pm: Power, with R exercise

Power: What it is, relation to sample size, dispersion, standard methods, simulations

02:30-04:00 pm: Design clinic
- Hands-on session on power in R
- Feedback and questions
- Figuring out the power for each study
- Work on research design

02:30-04:00 pm: Individual interviews

4:00–5PM: Recap
- Recap

- Quick go around: what did you find useful? What would you like to hear more about?

6–730PM: Office hours (optional)
- Each participant may agree on office hours directly with an instructor, esp. on statistics

Resources
- [10 things you should know about the local average treatment effect](#)
- [10 things you need to know about spillovers in experimental analysis](#)
- https://egap.org/resource/10-things-to-know-about-statistical-power/
- https://egap.shinyapps.io/spillover-app/

Thursday Aug. 10: Threats to Causal Inference

09:00-09:30 am: Recap day 1-3, Quiz

09:30-10:00 am: Threats - problems you can anticipate & design for; problems that happen despite your planning and you have to react to

- Reading and presenting results
- Endogenous subgroups
- Partial compliance: LATE and ITT
- Spillovers & Attrition

10:00-10:30 am: Exercise: presenting and interpreting results
10:30-10:45 am: Coffee break

11:00-11:30 am: workshop time

11:30-12:00 m: Design Talk - working with partners; randomize!
- Feedback and questions
- Work on research design

1:00-02:00 pm: LUNCH

02:00-02:30 pm: Example of study 5: (Rafael Piñeiro)

02:30-04:30 pm: Design clinic
- Feedback and questions
- Work on your project with DeclareDesign
- Revise research designs
- Prepare Presentations

05:15-05:30 pm: Recap
- Recap

- Quick go around: what did you find useful? What would you like to hear more about?

7:00 pm Group dinner Restaurante: TBC

Resources
- [10 things you need to know about statistical power](#)
- [10 things you need to know about covariate adjustment](#)
- [10 things you need to know about multiple comparisons](#)
- https://egap.shinyapps.io/Power_Calculator/
- DeclareDesign Guide

Friday Aug. 11: Ethics, Design presentations and Remaining Topics

09:00-10:00 am: Individual run-through of presentations

10:00-12:30 pm: Design presentations (two rooms)
- Each participant's does a 10-min presentation with 5-minutes discussion
- Addressing sampling, randomization approach, power, cluster randomized trials, potential threats

1:00-02:00 pm: LUNCH

02:00-04:30 pm: Other topics
Based on demand we will discuss one or more of the following themes.
1. Data collection (Rafael Piñeiro)
2. IRB/Ethics and Transparency in research (Rachid Laajaj)
3. Measurement strategies
4. Partnerships
5. Workflow

04:30-05:30 pm: Feedback and Next Steps
- How will we all continue to communicate and support each other after today?

List of Participants

EGAP Learning Days 13, List of participants

EGAP Latin American Regional Hub

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