ESP178 Applied Research Methods

More Clarifications

You say exploratory, I say explanatory…

Explanatory	Study may have exploratory elements but is *quantitative* test of relationships
Exploratory	Study may have exlanatory elements but is *qualitative* look at relationships

When to do what randomly and why…

Cross-Sectional and Longitudinal Studies	Sampling Plan	Randomly pick sample	Sample equivalent to population ensures External Validity (respresentative sample)
Experimental Studies	Recruitment Plan	Randomly assign to treatment group (TG) and control group (CG)	TG equivalent to CG ensures Internal Validity (no selection bias)
Experimental Studies *when treatment is applied to an area…*	Sampling Plan	▪ Randomly decide which areas get treatment, which don't. ▪ Randomly pick sample from within each area.	▪ Treatment area roughly equivalent to control area helps with Internal Validity ▪ Sample equivalent to population ensures External Validity (representative sample)

This kind of bias, that kind of bias…

Selection bias	In experimental studies	Treatment and Control Groups not equivalent	Affects Internal Validity: Can you be sure about causality? Is the observed effect of the treatment really about the treatment or is it due to differences between the groups?
Non-response bias	When doing surveys	People who choose not to respond to survey are different from those who do	Affects External Validity: Can you generalize the results? Are the results for the sample the same as they would be for the population?

To stratify or not to stratify…

Reasons to stratify	Because there is not one sampling frame available that covers your entire target population. When you want to be sure that you have enough participants from different subgroups of your population.
Possible variables on which to stratify – pick one!	City, e.g. if you want to study residents of different cities Socio-demographics like income or race/ethnicity
Practical considerations	Do you have a sampling frame (i.e. list) for each strata?