

# EGAP Learning Days Research Design Form

Source:

<https://egap.github.io/learningdays-resources/Exercises/design-form.html>

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## Section 1: Introduction

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1. **Researcher name**
2. **Research project title**
3. **One sentence summary of your specific research question**
4. **General motivation**
  - i. Why should someone who is not an academic care about the results of this research? [1 paragraph]
  - ii. What policy decision(s) will your research help inform? [1 paragraph] |
5. **Theoretical motivation**
  - i. What theoretical questions can this research shed light on? [1 paragraph]
  - ii. Key debate(s)/literature(s) that will be informed by the answer to your research question [1 paragraph]
6. **Primary hypotheses**
  - i. What are the key parameter/estimands the research design seeks to estimate? What sign and/or magnitude is predicted by primary hypotheses for each parameter/estimand? [1-2 paragraphs]
  - ii. What is the logic or theory of change behind the primary hypotheses [1-2 paragraphs]
  - iii. What are the key pieces in the relevant academic literature that inform your hypotheses? [2-3 pieces]

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**Section 1:  
Introduction**

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| 7. <b>Secondary hypotheses</b>  | <ul style="list-style-type: none"><li>i. What are the secondary parameter/estimands the research design seeks to estimate? What sign and/or magnitude is predicted by the secondary hypotheses for each parameter/estimand [These may be conditional effects for subgroups or hypotheses about additional outcomes or cross- randomized treatments.]</li><li>ii. What is the logic or theory of change behind each secondary hypothesis? [Explain what effects we should expect if the theory behind your primary hypothesis is correct.]</li></ul> |
| 8. <b>Alternative explanations if results are consistent with hypotheses</b>          | <ul style="list-style-type: none"><li>i. What alternative theories could explain the results?</li><li>ii. Hypothesis for an alternative outcome (or other subgroups) that would be consistent only with the alternative explanation and not the logic behind your primary hypothesis.</li></ul>   |
| 9. <b>Alternative explanations if results are <i>inconsistent</i> with hypotheses</b> | <ul style="list-style-type: none"><li>i. What alternative theories could explain the results?</li></ul>   |
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**Section 2: Population and Sample**

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| 10. <b>Population of interest</b>                     |  |
| 11. <b>Where and when will your study take place?</b> | <ul style="list-style-type: none"><li>i. Does this match up to your population of interest, or are there conditions that make this study context different?</li></ul>  |
| 12. <b>Sample size</b>                                | <ul style="list-style-type: none"><li>i. How is this sample selected? Be specific about the procedure.</li></ul>   |
| 13. <b>Consent</b>                                    | <ul style="list-style-type: none"><li>i. How will you obtain informed consent? If you will not, what is the justification?</li><li>ii. Is this population vulnerable to being coerced into participating in the study?</li></ul> |

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**Section 2: Population and Sample**

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| 14. <b>Ethics</b> | <ul style="list-style-type: none"><li>i. Is the sample size large enough that you have sufficient power for your research conclusions to be credible and useful?</li><li>ii. Is the sample size no larger than necessary for the research?</li><li>iii. Can the research (results) be used to target people or make people more vulnerable?</li></ul> |
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**Section 3: Intervention**

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| 15. <b>Status Quo</b>     | <ul style="list-style-type: none"><li>i. Describe the status quo—what are the current conditions in terms of the outcomes you hope to change? What aspects of the intervention already exist, if any?</li></ul>  |
| 16. <b>Intervention</b>   | <ul style="list-style-type: none"><li>i. Describe your intervention(s)</li><li>ii. What is already known about the effect of the proposed intervention relative to the status quo? Is there credible evidence on the question?</li></ul>   |
| 17. <b>Control</b>        | <ul style="list-style-type: none"><li>i. Describe the control condition</li><li>ii. Is the control condition a pure control (no intervention at all) or a placebo? What is the placebo condition designed to control for?</li></ul>  |
| 18. <b>Units</b>          | <ul style="list-style-type: none"><li>i. To what units (level) will the intervention be applied? Individual, classroom, school, village, municipality, etc.</li><li>ii. Is this the same level at which outcomes will be measured? If not, how will you address the different levels if they do not perfectly overlap?</li></ul> |
| 19. <b>Compliance</b>     | <ul style="list-style-type: none"><li>i. What does it mean to “take” (comply with) the the intervention?</li><li>ii. If the intervention is a program, how much someone need to attend (showing up once? finishing the program?) in order to count as having attended?</li></ul>   |
| 20. <b>Non-Compliance</b> | <ul style="list-style-type: none"><li>i. Is there any concern with non-compliance (either taking the intervention if assigned to control/placebo or failing to take the intervention if assigned to treatment)?</li></ul>  |

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**Section 3:  
Intervention**

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| 21. <b>Ethics</b> | <ul style="list-style-type: none"><li>i. Is the control condition no worse than the status quo, according to the best evidence available?</li><li>ii. Are there concerns that participants may be forced to comply with the intervention?</li><li>iii. What are the risks and magnitude of potentially negative effects of the treatment? Are such risks concentrated on a particular subset of your population?</li></ul> |
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**Section 4: Outcome  
and Covariates**

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| 22. <b>Primary Outcome</b>                | <ul style="list-style-type: none"><li>i. What is your primary outcome?</li></ul>  |
| 23. <b>Measurement</b>                    | <ul style="list-style-type: none"><li>i. How will it be measured? (Give the actual text of the survey question and response options, if using a survey measure. Is the outcome continuous, binary, etc.?)</li></ul>   |
| 24. <b>Priors</b>                         | <ul style="list-style-type: none"><li>i. What is the expected distribution of the primary outcome? (This may come from a prior study on a similar population or you may have to make an educated guess).</li></ul>  |
| 25. <b>Validity and measurement error</b> | <ul style="list-style-type: none"><li>i. Is there any concern with untruthful reporting? If so, how will you address it?</li></ul>  |
| 26. <b>Stages</b>                         | <ul style="list-style-type: none"><li>i. Will you collect a baseline?</li><li>ii. Will you collect a midline?</li><li>iii. Will you collect multiple waves of endline measurement?</li><li>iv. If you will collect a baseline or midline, how will you find the same respondents (minimize attrition?)</li></ul>  |
| 27. <b>Covariates</b>                     | <ul style="list-style-type: none"><li>i. What covariate data do you need, including for subgroup analysis? How will covariates be measured?</li><li>ii. What additional covariates (if any) will you measure?</li><li>iii. What additional outcomes or covariates will you collect to distinguish between your explanation and alternatives if your findings are consistent with your hypothesis?</li></ul> |

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**Section 4: Outcome  
and Covariates**

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| 28. <b>Ethics</b> | i. Will data collection be onerous (time, effort) or painful (physically, emotionally) for any respondents?<br>ii. Are these costs necessary? Have they been minimized?<br>iii. Are they outweighed by the potential benefits of the research to society? |
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**Section 5:  
Randomization**

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| 29. <b>Randomization strategy</b> | i. Complete/simple, block, cluster, factorial etc.   |
| 30. <b>Blocks</b>                 | i. What are they, how many blocks, how many units per block?   |
| 31. <b>Clusters</b>               | i. What are they, how many clusters, how many units per cluster?<br>ii. If you have clusters, what is the intra-class correlation (ICC)?<br>iii. Is clustering strictly necessary, or could you randomize at the individual level? |
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**Section 6: Analysis**

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| 32. <b>Estimator</b>           | i. What is your estimator?  |
| 33. <b>Standard Errors</b>     | i. What kind of standard errors will you use?   |
| 34. <b>Test</b>                | i. If you plan to report a p-value, what kind of test will you use?   |
| 35. <b>Missing Data</b>        | i. How will you handle missing data?  |
| 36. <b>Effect size</b>         | i. What is the expected effect size? What is the minimum effect size that would make the study worth running? what effect sizes have similar studies found? |
| 37. <b>What is your power?</b> |   |
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**Section 7:**  
**Implementation**

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| 38. <b>Randomization</b>   | i. How will you conduct the randomization? (on a computer in advance, drawing from an urn in public, etc.)   |
| 39. <b>Implementation</b>  | i. Who will implement the intervention?<br>ii. Are there any dangers to your research team, including enumerators? How will you minimize them?<br>iii. How will you track the quality of the implementation of the intervention? |
| 40. <b>Compliance</b>      | i. Who will measure compliance?  |
| 41. <b>Data management</b> | i. How will you manage the data? (security, anonymity, etc.)   |
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