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Programme Management and Data: Planning an RCT

A presentation by Rory Creedon to IGC Conference: *Impact Evaluation in Education*

Introductions & Hand-outs

Rory Creedon

- Project Coordinator Innovations for Poverty Action
- Managing four RCTs in Bangladesh.
- Focus on skills and education in firms (RMG)
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- Nonprofit dedicated to discovering what works to help the world's poor.
- RCT methodology
- Looking to expand into Education in Bangladesh

Hand-Outs

https://www.dropbox.com/sh/s27pxwffuqn5wxg/LZ9ky_ON2U

HO: HO_name

Agenda

- Intro to the Projects & Data
- Assembling & Training a Team
- Team Processes
- Survey Specifics
- Getting, Entering &Cleaning Data

Supervisor Training Project

Hypothesis: Training existing supervisors affects sewing line productivity.

Step 1	**40 factory sample randomly divided into 4 "Waves". Factories in the same wave send trainees at the same time. Waves trained consecutively.**
Step 2	**Factories select between 4 and 6 lines from which they nominate supervisors for training.**
Step 3	**Lines are randomly allocated to treatment or control status. Treatment lines receive training in round 1, control lines in round 2 (6 months late).**
Step 4	**Analysis of *within* factory productivity differences between Treatment Lines and Control Lines between Round1 and Round 2 gives estimation of the effect of training on productivity.**
Step 5	**Analysis of *between* factory productivity differences as second round of training completed gives further evidence but the data are non-experimental at this point.**

Types of Data

OUTCOME DATA

- For measuring key outcomes:
  - Factory Data (STP)
  - Attendance
  - Exam Results etc.
- Typically external data provider
- Management very particular to the project.

SURVEY DATA

- Many different uses
- Add level of understanding to key outcomes:
  - Different effects based on age
  - Class size
  - Household status
- Understanding mechanisms for change
  - Qualitative information
  - Motivations
  - Attitudes

Note: These data must be capable of interacting, so plan accordingly!

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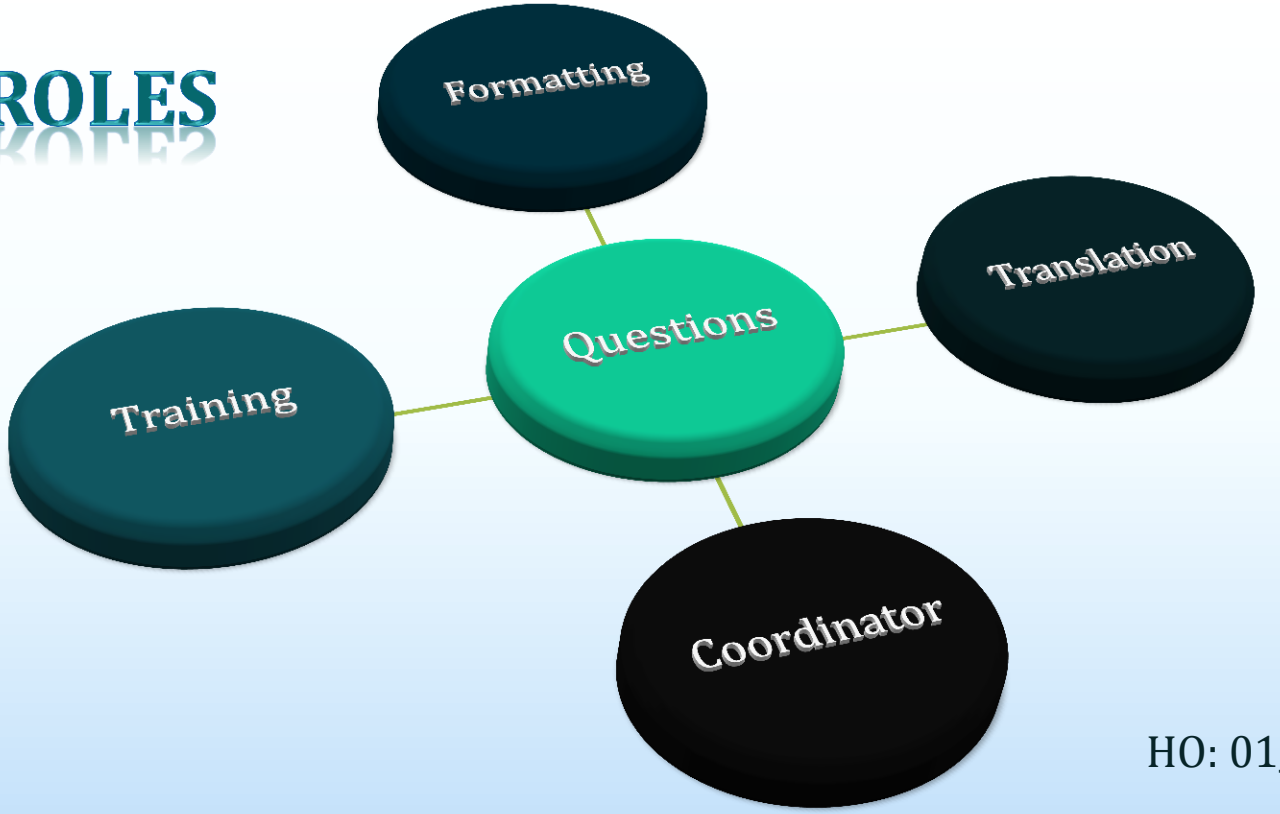
Hiring A Core Team

Hiring a core team is an important step. These people will become your interface with the wider survey team, and will be experts in your instrument. They should be hired during the survey preparation phase . Stay flexible with regard to who does what until after pilot phase.

KEY ROLES



HO: 01_Example_Survey

Hiring Enumerators

Being an enumerator is not a simple job. Make extensive use of testing when selecting candidates. Retain as much control over who is chosen as possible.

Step 1

- Identify key and challenging parts of your survey, and create training scenarios.

Step 2

- Train you core team in how to administer the testing scenarios

Step 3

- Administer tests to first wave of enumerators using you core team
- Use a score card

Step 4

- Train hired enumerators in how to administer tests, and repeat with other possible enumerators

HO: 02_Hiring_Exercises
03_Example_Scorecard

Training Enumerators

Having well trained enumerators is the key to getting good data. For a simple survey plan at least three days training. For more complex surveys even longer.

ESTABLISH THE SURVEY

- Explain context and unfamiliar terms
- Read through survey manual
- Practice survey day processes
- Explain use of codes
- Create training tools like those already seen for more complex/critical parts of the survey.

ESTABLISH THE TEAM

- Explain roles and duties
- Allow survey coordinator to establish him/herself as leader
- Motivate your team
- Explain incentives (if any)

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Survey Manual

Prepare a survey manual well in advance. Doing so will help you get your thoughts in order about how the survey will proceed, and the document will be a core part of sharing processes with your survey team.

BACKGROUND

- Intro to Project
- Survey Aims
- Survey Tools
- Survey team and functions

PRE-SURVEY

- Preparing Codebooks
- Printing
- Preparing Equipment
- Transport

SURVEY DAY

- Conduct Rules
- Setting up survey space
- Administering the survey
- Dealing with absence and other unforeseen events

POST-SURVEY

- Survey Checking
- Survey Editing
- Storage of Surveys

HO: 04_Example_Manual

Piloting

Piloting is essential. Try to build in two pilots if possible. The extent of your pilot will depend upon budget, sample and timeframe.

PILOTING QUESTIONS

- Are participants understanding the questions/instructions?
- Is there a good dispersion of answers?
- Are the questions generating useful data?

Have your survey team take extensive notes, and sit down and discuss after each pilot day. Enter the data and examine if possible.

PILOTING TEAM & PROCESSES

- Do the processes in your manual reflect reality?
- Is your team structure working?

Review your processes with the coordinator and update survey manual. Rotate team roles if necessary. Stay flexible

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UIDs

UIDs are numerical codes that identify the subject of the survey. Let's imagine we are doing a survey of children/teachers in a school: How to create unique identifiers?

1. UID: 3 04 2 1 2 27 09

- 3 — District Code
- 04 — School Code
- 2 — Teacher/ Pupil
- 1 — Treat/ Control
- 2 — Male/ Female
- 27 — Age
- 09 — Unique Serial

2. UID: 30409

All the UID needs to do is to uniquely identify the individual. All other information should be kept elsewhere. Have a UID strategy that everyone understands especially the coordinator. The UID should be written on every page of the survey in case pages are separated.

Codes

You will make extensive use of codes in your survey. Getting them set up correctly is essential for the entry/cleaning process. An example question:

How old are you *(in years)?* *(Codes: use =refused to answer, =don't know, if needed)*	|___|___|___|

EXAMPLE YES/NO CODES

Yes	001
No	002
Other	-55
Not Applicable	-66
Refused to answer	-88
Don't Know	-99

TIPS

- Make all codes the same length if possible
- Pad short codes with zeros
- Only blanks should be skipped questions

HO: 05_Example_Codebook

Code Books

Gather as much information about the participants to be surveyed beforehand and put this in a survey codebook. The information will help establish that the right person is being surveyed, and the information will later be used to check the survey data when cleaning.

Serial	Name	Age	Class	Sex	Pupil/ Teacher	UID	Surveyed? (Y/N)	Surveyor ID	Comments
1	Rory	12	5	M	P	10401			
2	Annie	13	5	F	P	10402			
3	Tomas	27	6	M	T	10403			
4						10404			
5						10405			

Always revise the codebook after the survey to incorporate changes to the information.

HO: 06_Example_Survey_Codebook

Open Questions

Although tempting, use this type of question sparingly. Be entirely clear about how you will process the data into useable information. Special instructions are needed for the enumerators.

Step 1	Check the participant has fully understood the questions
Step 2	Listen carefully to the answer
Step 3	Ask the respondent to explain anything that is unclear in the answer
Step 4	Evaluate if the question has been answered
Step 5	Briefly summarize the response
Step 6	Confirm the response

HO: 07_Open_Questions

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Paper vs. Electronic

The cost of tablets has fallen dramatically in recent years, and there are a variety of programs you available for creating surveys. Whether a tablet is right for you will depend upon budget, scale and available expertise.

VS.

PAPER

- Flexible editing
- Easy to prepare
- Familiar
- Expensive at large scale
- Human Error

TABLET

- Hard to adjust
- Expertise needed
- Intimidating?
- Cheap at large scale
- ‘Live’ checking
- Ability to load previous answers

HO: CSPro_Folder

Data Entry

TEMPLATES

- Excel is possible, but can get very messy, no control over what is entered

- Free software developed by the US Census Bureau.
- Full control over logic and type of data entered.
- Requires some learning, but is well worth the effort.

HO: CSPro_Folder

IN HOUSE/OUT SOURCE

- Do you have the manpower to enter the data?
- A member of your team should be present whichever method you choose
- I prefer the control that in-house gives you

Whichever you choose, have a well thought out and strict set of protocols to manage the flow, storage and handling of survey data

HO: 08_Data_Entry_Protocols

Data Entry - Reconciliation

To ensure the accuracy of the data undertake at least single reconciliation. It is even better practice to undertake double reconciliation.

SINGLE RECONCILIATION

1st Entry — 2nd Entry

Differences

Corrections

Replacements

DOUBLE RECONCILIATION

1st Entry — 2nd Entry

Differences

1st Corrections — 2nd Corrections

Differences in corrections

Corrections Replacements / Replacements

Data Cleaning

DATA CLEANING GOALS

1. Create data sets understandable/usable by others.
    - Question numbers
    - Data labels
    - Notes - question
2. Ensure that the data are logical
    - Check skip patterns
    - Check code ranges
    - Code open questions
    - Create missing values – what is your strategy?

TECHNOLOGIES

- Stata
- Industry standard
- Understood by many

- General purpose programming language
- Objects and tools that go far beyond stata
- Pandas library for data work

HO: 09_Cleaning_do_file

THANK YOU FOR YOUR ATTENTION

Questions Welcome