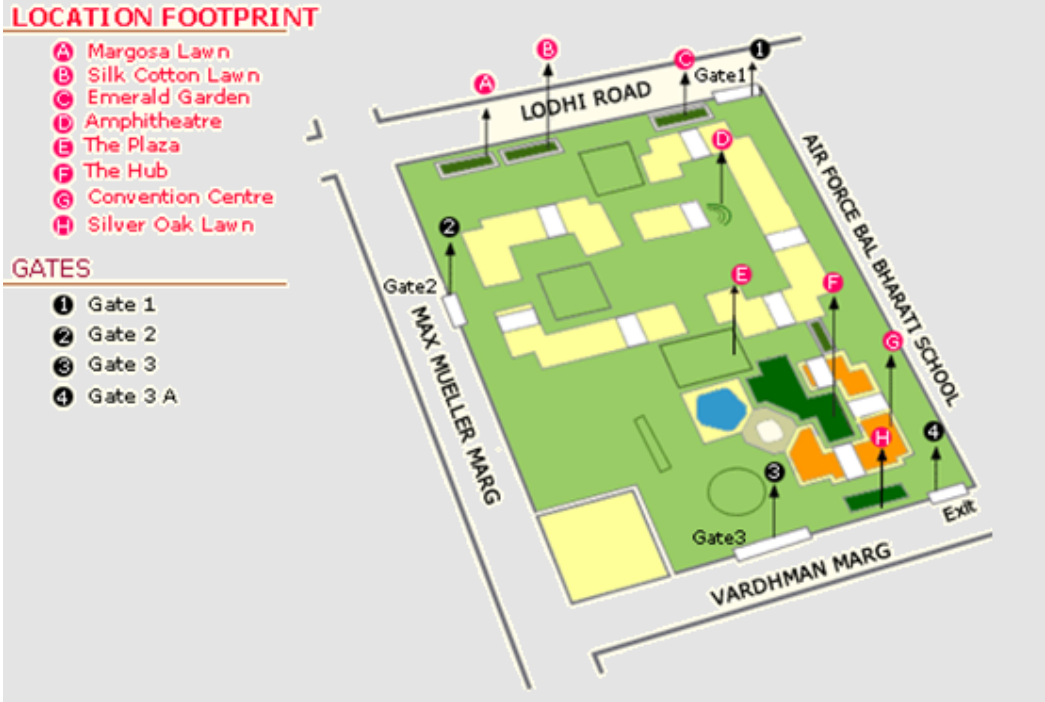
Evaluating Social Programs

J-PAL South Asia at IFMR Executive Education course

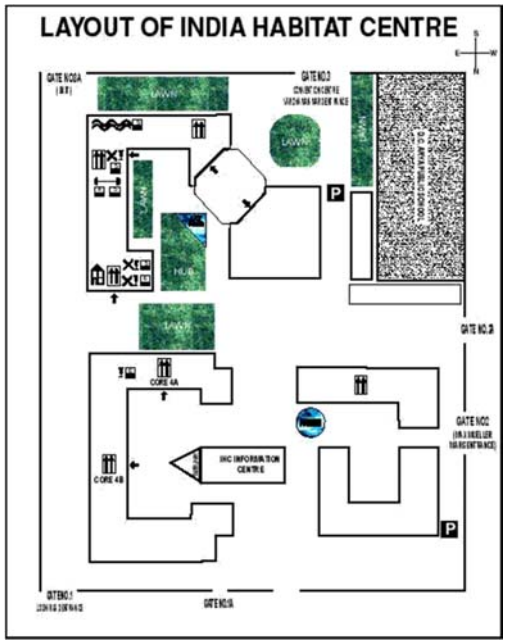
July 23, 2012 – July 27, 2012

ABDUL LATIF JAMEEL
Poverty Action Lab
TRANSLATING RESEARCH INTO ACTION

Directions inside India Habitat Centre



1. **Enter from Gate No. 3**
2. Use Core 4A from basement parking for the Convention Centre
3. Cars can drop off guests at Convention Centre porch
4. The course will take place at the "Theatre" on 23rd, 24th and 25th July; at the "Magnolia" on 26th July and at the "Maple" on 27th July. There will be signage boards as well as our staff directing you to the hall



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Regional Centers for Learning on Evaluation and Results

PROGRAM

J-PAL Executive Education Course in Evaluating Social Programs, July 23-27, 2012

India Habitat Centre, New Delhi

	Monday July 23, 2012 *Theatre Room*	Tuesday July 24, 2012 *Theatre Room*	Wednesday July 25, 2012 *Theatre Room*	Thursday July 26, 2012 *Magnolia Room*	Friday July 27, 2012 *Maple Room*
9:30 – 11:00		Lecture 2: *Measuring Impacts* *(Nick Ryan, MIT)*	Lecture 4: *How to Randomize* *(Emily Breza, Columbia Business School)*	Lecture 6: *Sampling and Sample Size* *(Paul Niehaus, UCSD)*	Lecture 8: *Cost-effectiveness Analysis and Scaling up* *(Shobhini Mukerji and John Floretta, J-PAL South Asia)*
11:00 – 11:15		Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:15 – 12:30		Group work on case study 2: *Learn to Read* (45min) Group work on presentation: Indicators	Group work on case study 3: *Extra Teacher Program*	Group Exercise C*:* *Sample Size Estimation*	Feedback survey Group work on presentation
12:30 – 1:30	Registration/Lunch	Lunch	Lunch	Lunch	Lunch
1:30 – 2:45	Welcoming Remarks Lecture 1*:* *What is Evaluation* *(Shobhini Mukerji and John Floretta, J-PAL South Asia)*	Lecture 3: *Why Randomize* *(Sharon Barnhardt, IFMR)*	Group work on presentation: Randomization Design	Group work on presentation: Power and sample size (60min)	Group presentations
2:45 – 3:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
3:15 – 4:30	Group work on case study 1: *Women as Policymakers* Decision on group project	Group Exercise A: *Random Sampling*	Lecture 5: *Threats and Analysis* *(Aprajit Mahajan, Stanford)*	Lecture 7: *Project from Start to Finish* *(Paul Niehaus, UCSD)*	Group presentations
4:30 – 5:45	Group work on presentation: Theory of change, research question	Group Exercise B: *Randomization Mechanics*	Group work on case study 4: *Deworming in Kenya* Primer on Sample Size	Group work on presentation	
6:00 – 7:30	Optional: Strengthening Environment Regulation In India Panel				
8:00-10:00	Dinner: Taj Ambassador Hotel				

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Groups

Group 1
TA: Ashish Shenoy

Anjana Dube
Mohammed Kabir
Lakshmi Kumar
Leena Sushant
Wajid Shah

Group 2
TA: Harini Kannan

Guillaume de Kleijn
Manoj Patki
Sukoon Tandon
Esha Chhabra
Shailesh Jagtap

Group 3
TA: Diva Dhar

Harpreet Gill
Jeevan Raj Lohani
Chinmaya Kumar
Rudaba Khondker
KN Murthy

Group 4
TA: Angela Ambroz

Rumana Archi
S Kaushik
Kerry Harwin
Subhalakshmi Ganguly
Ruben Menon
Sikha

Group 5
TA: Rachna Chowdhuri/ Conner Brannen

Tahreen Chowdhury
Rabya Nizam
Mahbubur Rahman
Ramya Subrahmanian
Pratigya Karla

Group 6
TA: Mahesh

Mohammed Alim
Asch Harwood
Payal Gupta
Dewi Susanti
Enkhtur Maini
Suresh Kumar Dalpath

Group 7
TA: John Floretta

Amit Jain
Sharath Jeevan
James Townsend
Rajesh Anand
Chandra Bhushan

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Sharon Barnhardt

Sharon Barnhardt is an Assistant Professor of Economics at the Institute for Financial Management and Research (Chennai). Her research focuses on issues of urban development and rural health, through the use of natural and randomized experiments in India. Her work includes studies of the impact of government housing programs on economic mobility, inter-religious attitudes, and social networks; an experiment on the effectiveness of community versus private management in shared toilets in slums; and a governance pilot with the Hyderabad police. She is also currently working on an experiment to measure the impact on anemia and productivity of making iron and iodine fortified salt available in stores in rural Bihar. Professor Barnhardt is an Affiliate of the Institute for the Study of Labour (IZA), Faculty Advisor to the Centre for Micro Finance, and also holds an MPA from Princeton University.

Emily Breza

Emily is currently an Assistant Professor at Columbia Business School. She completed her Ph.D. from the MIT Economics Department with a focus on development economics and household finance. She is particularly interested in how financial decision making interacts with both social effects and behavioural biases, and how financial product design can better integrate these factors. Some of her current research aims to use social networks to help present-biased savers better accomplish their goals. She is also involved in a project to understand the impacts of the 2010 Andhra Pradesh ordinance on previous microfinance borrowers.

John Floretta

John Floretta is helping to establish the South Asia Centre for Learning and Evaluation and Results (CLEAR) led by JPAL South Asia. John works on building monitoring and evaluation capacity in the region and supporting dissemination of policy lessons and scale-up of successful programs. His career has focused on international development program management and analysis. He worked in the UN system in China for five years in volunteer and civil society promotion, disaster management, and food security and later conducted analysis and evaluations with Mercy Corps and implemented learning management strategies at Nike Foundation. He holds a Masters of Arts in Law and Diplomacy from the Fletcher School at Tufts University.

Aprajit Mahajan

Aprajit Mahajan is an Assistant Professor in the Department of Economics at Stanford University. Mahajan's research interests are in development and econometrics with a regional focus on India. On-going research includes field experiments on management practices in large firms and the provision of health-improving technologies in rural India.

Shobhini Mukerji

Shobhini Mukerji is the Executive Director of J-PAL South Asia. She has experience in managing large scale assessments, training and capacity building, data management and analysis. She has previously been employed with Pratham, a large scale education initiative in India and worked on research projects with the Commonwealth Education Fund (CEF-UK), UNDP and UNICEF. At J-PAL South Asia, she oversees all the research, policy and training activities and has experience in the education and health sector in particular. Shobhini is a principal investigator on a randomized evaluation of an education project which looks at interventions to improve learning levels of children in government schools. She holds a Master's degree in Social Research Methods from the London School of Economics with a focus on Social Policy and Statistics.

Paul Niehaus

Paul Niehaus is an assistant professor in the Department of Economics at UC San Diego. He is also a Junior Affiliate at the Bureau for Research and Economic Analysis of Development (BREAD), and an Affiliate at the Centre of Evaluation for Global Action (CEGA). His research deals with welfare and corruption in developing countries and with learning processes.

Nicholas Ryan

Nicholas Ryan's research concerns environmental regulation and energy markets in developing countries. Energy use enables high standards of living but rapid, energy-intensive growth has caused many environmental problems in turn. Nick studies how firms' energy use and pollution emissions respond to regulation and market incentives. His work includes empirical studies of how regulators and the private sector can best abate pollution at low social cost, how firms make decisions about energy-efficiency and the determinants of electricity pricing. He expects to receive his PhD in Economics from the Massachusetts Institute of Technology in September, 2012 and graduated summa cum laude from the University of Pennsylvania with a Bachelor's degree in Economics. He worked as a Research Associate in the Capital Markets group at the Federal Reserve Board of Governors in Washington, D.C.

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List of Participants

#	Last Name	First Name	Designation	Organisation
1	Alim	Mohammed	Senior Research Associate	BRAC
2	Anand	Rajesh	Assistant Manager, Stewardship Department	The Rotary Foundation of Rotary International
3	Archi	Rumana	Monitoring and Evaluation Specialist	USAID (Bangladesh)
4	Bhushan	Chandra	Deputy Director General	Centre for Science and Environment
5	Chhabra	Esha	In-Country Economist	International Growth Centre/ADRI
6	Chowdhury	Tahreen	Research Associate	Bangladesh Institute of Development Studies (BIDS)
7	Dalpath	Suresh Kumar	Deputy Director (Child Health), State Immunization Haryana	Government of Haryana, Health Department
8	de Kleijn	Guillaume	Programme Manager	Delegation of the European Union (EU) to Nepal - European Commission (EC) / European External Action Service (EEAS) (Nepal)
9	Dube	Anjana	Research Scholar	Indian Institute of Management Bangalore (IIMB)
10	Ganguly	Subhalakshmi	Head, Research, Policy & Communication	IL&FS Education and Technology Ltd.
11	Gill	Harpreet	Manager, Student Impact	Teach For India
12	Gupta	Payal	Program Officer, Asia	Micronutrient Initiative
13	Harwin	Kerry	Program Manager	Digital Green
14	Harwood	Asch	Research Associate	Council on Foreign Relations (USA)
15	Jagtap	Shailesh	Public Health Specialist	Public Health Foundation of India (PHFI)
16	Jain	Amit	CEO	Health Point Services India Pvt. Ltd
17	Jeevan	Sharath	Founder & CEO	STIR Education
18	Kabir	Mohammed	Research Fellow	BRAC
19	Karla	Pratigya	M&E Officer	IFC
20	Kaushik	S	Technical Officer, Monitoring and Evaluation	Micronutrient Initiative
21	Khondker	Rudaba	Programme Head	BRAC
22	Kumar	Lakshmi	Assistant Professor	Institute for Financial Management and Research

#	Last Name	First Name	Designation	Organisation
23	Kumar	Chinmaya	In-Country Economist	International Growth Centre Bihar/ADRI
24	Lohani	Jeevan Raj	Programme Coordinator	Nepal Evaluation and Assessment Team (NEAT)
25	Maini	Enkhtur	Research Officer	Kusuma Foundation
26	Menon	Ruben	Assistant Director, Finance	J-PAL South Asia
27	Murthy	K. N	CEO	Karnataka Evaluation Authority
28	Nizam	Rabya	Poverty and Social Protection Advisor	DFID (Bangladesh)
29	Patki	Manoj	Senior Program Manager, Health Systems Support Unit	Public Health Foundation of India (PHFI)
30	Rahman	Mahbubur	Senior Research Associate	BRAC
31	Shah	Wajid	Research Fellow	Bangladesh Institute of Development Studies (BIDS)
32	Sikha		Team member	Digital Green
33	Subrahmanian	Ramya	Social Policy Specialist	UNICEF
34	Susanti	Dewi	Research Consultant	TNP2K/ Secretariat of the National Team for the Acceleration of Poverty Reduction (Indonesia)
35	Sushant	Leena	Director Research	Breakthrough
36	Tandon	Sukoon	Manager, Organizational Effectiveness	Teach For India
37	Townsend	James	Programme Director	STIR Education

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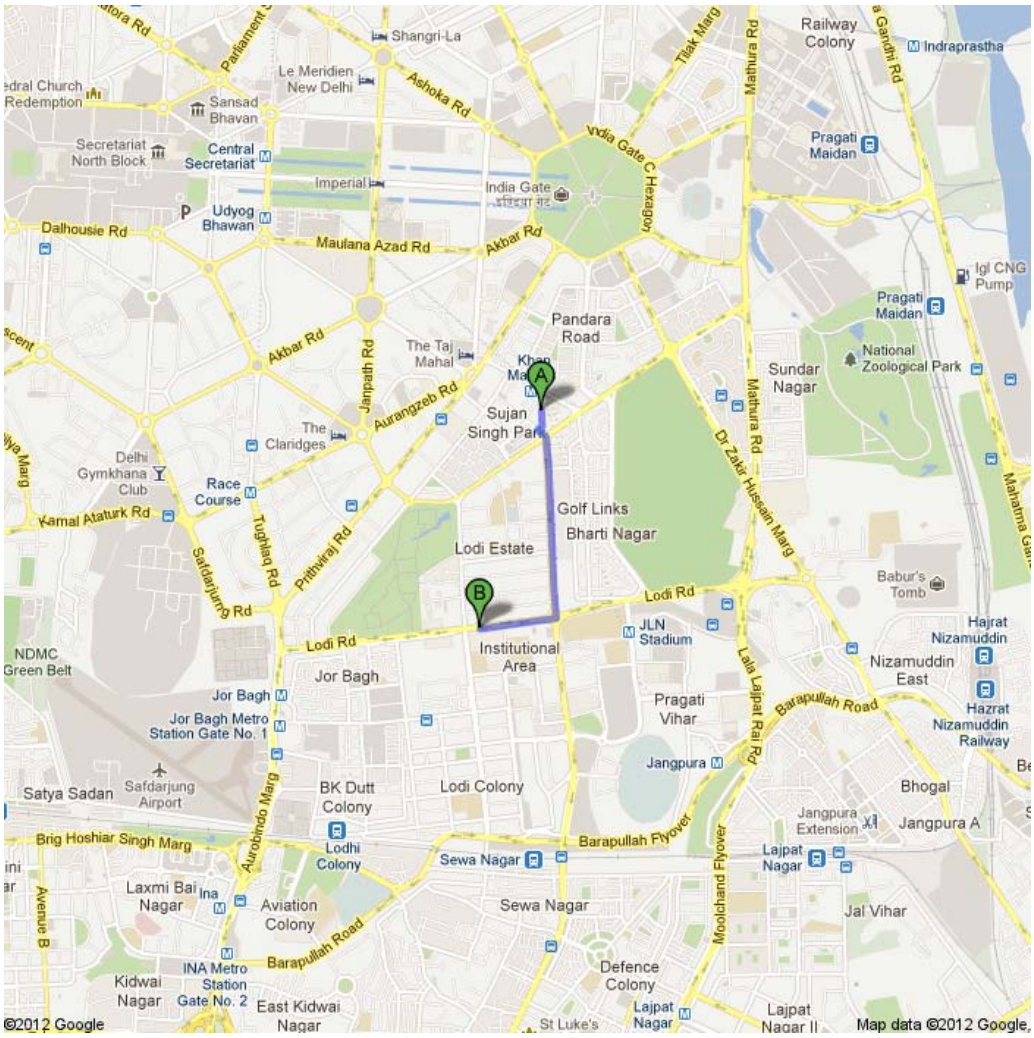
Directions from Taj Ambassador Hotel to India Habitat Centre



The Ambassador Hotel, Sujan Singh Park Cornwallis Road, New Delhi.

1. Head South
2. Turn Left towards Maharshi Raman Marg
3. Slight right onto Maharshi Raman Marg
4. Turn right onto Lodi Road. Destination will be on the left

India Habitat Centre, IHC Complex, Lodi Road, New Delhi.

J-PAL Executive Education Course
New Delhi, India
July 2012

Participant Name:

What are your goals for the course?

In order to gauge how well our course is matching our participants' interests, J-PAL would like to know what participants' goals are going into the course.

Please rank the **4 topics** that most interest you or that you are hoping to learn the most about during the course (indicate your most important goal with a "1", and continue up to "4" in order of decreasing importance):

Understanding what evaluation is and why it is valuable	
Conceptualizing and constructing a logical framework or Theory of Change	
Developing a research question	
Developing indicators to measure outcomes	
Identifying the pros and cons of different types of impact evaluation	
Understanding the basic design of a randomized evaluation	
Randomizing the assignment of a program in the face of practical constraints	
Calculating statistical power/determining sample size	
Selecting an unbiased, representative sample	
Managing an evaluation	
Collecting data	
Using monitoring data to track and improve program implementation	
Understanding and dealing with what can go wrong in a randomized evaluation	
Analyzing data obtained through an evaluation	
Conducting cost-effectiveness analysis	
Making evaluation relevant for policymaking	
Scaling up effective interventions	
Fostering partnerships with researchers for evaluation	

J-PAL Executive Education Course
New Delhi, India
July 2012

Participant Name:

What did you learn from the course?

In order to gauge how well our course is matching our participants' interests, J-PAL would like to know what participants feel that they learned throughout the course.

Please rank the **4 topics** that you learned the most about during the course (indicate the topic you learned the most about with a "1", and continue up to "4" in order of decreasing amount learned):

Understanding what evaluation is and why it is valuable	
Conceptualizing and constructing a logical framework or Theory of Change	
Developing a research question	
Developing indicators to measure outcomes	
Identifying the pros and cons of different types of impact evaluation	
Understanding the basic design of a randomized evaluation	
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J-PAL Executive Education Course
New Delhi, India
July 2012

Participant Name:

Pre-Course Assessment

Here is a short survey that poses questions about the various topics covered throughout the course. Please answer the questions to the best of your ability. They will provide J-PAL with useful information about how well the course teaches key concepts.

---

1. **Suppose your NGO seeks to launch a chlorine distribution program to improve access to clean water for its beneficiary households. Please indicate which aspect of program evaluation (numbered below) is most appropriate for:**

Measuring the effects of chlorine distribution on important health indicators for beneficiary households	
Following whether or not chlorine is actually distributed to beneficiary households	
Constructing a model to describe how chlorine distribution could lead to outcomes of interest (e.g. reduced incidence of diarrhea in children)	
Comparing the health improvements per dollar spent on the chlorine distribution program with health improvements per dollar spent on other clean water programs	
Identifying the prevalence of diarrhea and the subpopulation that does not currently have access to clean water	

1. Needs Assessment
2. Program Theory Assessment
3. Process Evaluation
4. Impact Evaluation
5. Cost Effectiveness Analysis

---

2. **Define the counterfactual:**

_____

_____

_____

_____

_____

3. a. What is the key problem with the counterfactual?

A. Cannot be mimicked or estimated
B. It is not comparable with the treatment group
C. Cannot be measured or observed
D. It's outcomes are influenced by different factors
E. All of the above

b. Why is random assignment the best method to deal with this problem?

A. Ensures that different groups don't react differently to the program
B. Ensures the external validity of the experiment
C. Ensures that treatment and control groups don't differ systematically at the outset of the program
D. Ensures that everyone has equal probability of getting the intervention
E. All of the above

4. What is selection bias?

A. Program participation is correlated with an observable or unobservable characteristic
B. Outcome variable is correlated with an observable or unobservable characteristic
C. Omitted variable bias
D. All of the above

5. True or False: In a randomized evaluation, failure to control for other variables that are correlated with your outcome measure will bias results.

TRUE	FALSE

6. **Your NGO wants to produce a logical model about how their chlorine distribution program will improve health outcomes for beneficiary households. Please complete the model with numbered items below that correspond to each category (Just write numbers. Some columns may have multiple answers.):**

Needs	Input	Output	Outcome	Impact (primary outcome)	Long-Term Goal

1. Households use chlorine to purify their water
2. Households learn how to use chlorine
3. Chlorine distribution program
4. Reduced prevalence of child diarrhea
5. Households receive chlorine
6. Households do not have access to clean water
7. Prevalence of diarrhea (especially for children) is high
8. Reduced child mortality
9. Households consume more clean water

7. **Which numbered items listed above can be measured using the following indicators/survey questions? (Multiple answers possible)**

Have any of your children had diarrhea within the last week?	
Concentration of parasites/bacteria in household water supply.	
Do you drink purified water?	

---

8. **Please indicate (by circling) whether the following factors increase (⇑), decrease (⇓), do not influence (=), or have an ambiguous effect (?) on the sample size needed in a study:**

Larger expected (and relevant) effect size	⇑	⇓	=	?
Increased variance of the final outcome variable	⇑	⇓	=	?
Conducting a baseline survey (or using covariates)	⇑	⇓	=	?
Higher intra-cluster correlation (rho)	⇑	⇓	=	?
Stratification	⇑	⇓	=	?

9. True or False: Using the wrong assumptions (for example, regarding variance or effect size) in your power calculations could bias your impact estimate (i.e. lead to an inaccurate impact estimate).

TRUE	FALSE

---

10. Please indicate which method of randomization (numbered below) is most appropriate if:

Your chlorine distribution program expands over time and must be provided to all of your beneficiaries eventually	
Your chlorine distribution program must be open to everyone who wants to receive it, but take up of chlorine can easily be improved by providing incentives to a randomly assigned group of your beneficiaries	
All of your beneficiaries must receive chlorine through your program at some point in the next two years, but you only have enough resources to provide chlorine to half of the beneficiaries each year	
Your chlorine distribution program is oversubscribed; not everyone will receive your program	

a. Rotation
b. Basic Lottery
c. Phase-In
d. Encouragement

11. As part of a chlorine distribution program, your NGO installs chlorine dispensers at the village's main water source. At which level is it best to randomize the assignment of this program?

a. The individual level
b. The household level
c. The catchment area of the well
d. The district in which your NGO operates

Explain your choice of randomization level:

_____

_____

_____

_____

_____

_____

12. Please indicate (by circling) whether the following challenges are likely to cause you to overestimate (⇑), or underestimate (⇓) the impact of the chlorine distribution program, or whether they will have no effect (=) or ambiguous effect (?) on your impact estimate:

The healthier individuals in the treatment group migrate to cities for work	⇑	⇓	=	?
20% of your treatment group drops out of the study AND 20% of your control group drops out of the study	⇑	⇓	=	?
During the intervention period, some individuals in the control group drink chlorinated water from treatment group households even though they were not targeted to receive chlorine	⇑	⇓	=	?
Prior to the intervention, wealthy individuals in the control group already purchased chlorine to purify their water. When they found out that neighboring villages were receiving chlorine for free through the program, they became upset and refused to respond to the survey.	⇑	⇓	=	?

_____

Participant Name:

Review and Feedback

Here is a short survey that reviews the various topics covered throughout the course. Please answer the questions to the best of your ability. It will provide J-PAL with useful information about how well the course teaches key concepts.

At the end of this form, there is space for you to provide comments about any of the lectures/lecturers, case studies, and exercises throughout the course.

---

1. **Suppose your NGO seeks to launch a monitoring program using cameras in schools to increase teacher attendance. At the beginning and end of each day, the teacher takes a picture of themself with their students using a tamper-proof date-stamped digital camera to verify their attendance. Please indicate which aspect of program evaluation (numbered below) is most appropriate for:**

Constructing a model to describe how teacher monitoring could lead to outcomes of interest (e.g. better child learning outcomes)	
Deciding whether to invest in a camera-monitoring program with your limited budget or some other program that targets teacher attendance	
Measuring the effects of teacher monitoring on child learning outcomes	
Following whether or not cameras are actually supplied to participating schools	
Identifying the prevalence of teacher absenteeism and low-achievement among students	

1. Needs Assessment
2. Program Theory Assessment
3. Process Evaluation
4. Impact Evaluation
5. Cost Effectiveness Analysis

---

1. **Define the counterfactual:**

_____

_____

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3. **a. What is the key problem with the counterfactual?**

    A. Cannot be mimicked or estimated
    B. It is not comparable with the treatment group
    C. Cannot be measured or observed
    D. It's outcomes are influenced by different factors
    E. All of the above

b. Why is random assignment the best method to deal with this problem?

    A. Ensures that different groups don't react differently to the program
    B. Ensures the external validity of the experiment
    C. Ensures that treatment and control groups don't differ systematically at the outset of the program
    D. Ensures that everyone has equal probability of getting the intervention
    E. All of the above

4. **What is selection bias?**

    A. Program participation is correlated with an observable or unobservable characteristic
    B. Outcome variable is correlated with an observable or unobservable characteristic
    C. Omitted variable bias
    D. All of the above

5. **True or False: In a randomized evaluation, failure to control for other variables that are correlated with your outcome measure will bias results.**

TRUE	FALSE

---

6. **Please indicate which method of randomization (numbered below) is most appropriate if:**

All of your beneficiaries must receive cameras through your program at some point in the next two years, but you only have enough resources to provide cameras to half of the beneficiaries each year	
Your monitoring program is oversubscribed; not everyone will receive your program	
Your monitoring program expands over time and must be provided to all of your beneficiaries eventually	
Your monitoring program must be open to everyone who wants to receive it, but take up of the program can easily be improved by providing incentives to a randomly assigned group of your beneficiaries	

   a. Basic Lottery
   b. Phase-In
   c. Rotation
   d. Encouragement

7. **At the beginning and end of each day, the teacher takes a picture of themself with their students using a tamper-proof date-stamped digital camera. At which level is it best to randomize the assignment of this program?**

   a. The student level
   b. The classroom level
   c. The school level
   d. The village level
   e. The district in which your NGO operates

   Explain your choice of randomization level:

8. **Your NGO wants to produce a logical model about how their monitoring program will improve child test scores for beneficiary schools. Please complete model with the numbered items below that correspond to each category:**

Needs	Input	Output	Outcome	Impact (primary outcome)	Long-Term Goal

1. NGO districts give performance rewards to teachers with high attendance
2. Schools have high teacher absenteeism
3. Teachers use cameras to verify their own attendance
4. Children have low test scores
5. The monitoring program
6. Teachers attend school more often
7. Higher child test scores
8. Schools receive cameras
9. Improved learning and better job opportunities

9. **Which numbered items listed above can be measured using the following indicators/survey questions? (Multiple answers possible)**

Number of pictures taken using the camera	
Test scores of children	
Which of your teachers are present today?	

10. Please indicate (by circling) whether the following challenges are likely to cause you to overestimate (⇑), or underestimate (⇓) the impact of the chlorine distribution program, or whether they will have no effect (=) or ambiguous effect (?) on your impact estimate:

During the intervention period, some schools in the control group buy cameras to monitor teachers even though they were not targeted to receive the program	⇑	⇓	=	?
Prior to the intervention, high achieving schools in the control group already had some kind of monitoring practices in place. When they found out that neighboring schools were receiving cameras (an improved monitoring technique) for free through the program, they became upset and refused to let the NGO administer tests in their school.	⇑	⇓	=	?
Parents of low performing kids in the control schools transfer their kids to treatment schools in the middle of the school year.	⇑	⇓	=	?
15% of your treatment group drops out of the study AND 15% of your control group drops out of the study	⇑	⇓	=	?

---

11. Please indicate (by circling) whether the following factors increase (⇑), decrease (⇓), do not influence (=), or have an ambiguous effect (?) on the sample size needed in a study:

Larger expected (and relevant) effect size	⇑	⇓	=	?
Higher intra-cluster correlation	⇑	⇓	=	?
Stratification	⇑	⇓	=	?
Increased variance of the final outcome variable	⇑	⇓	=	?
Conducting a baseline survey (or using covariates)	⇑	⇓	=	?

12. True or False: Using the wrong assumptions (for example, regarding variance or effect size) in your power calculations could bias your impact estimate (i.e. lead to an inaccurate impact estimate).

TRUE	FALSE