Programme Theory and
Theory of Change Analysis

Radhika Menon, Birte Snilstveit, Philip Davies,
International Initiative for Impact Evaluation [3ie]

The Policy Cycle

Understanding the Problem (Conceptualisation)

Developing Solutions (Policy Development)

Putting Solutions Into Effect (Implementation)

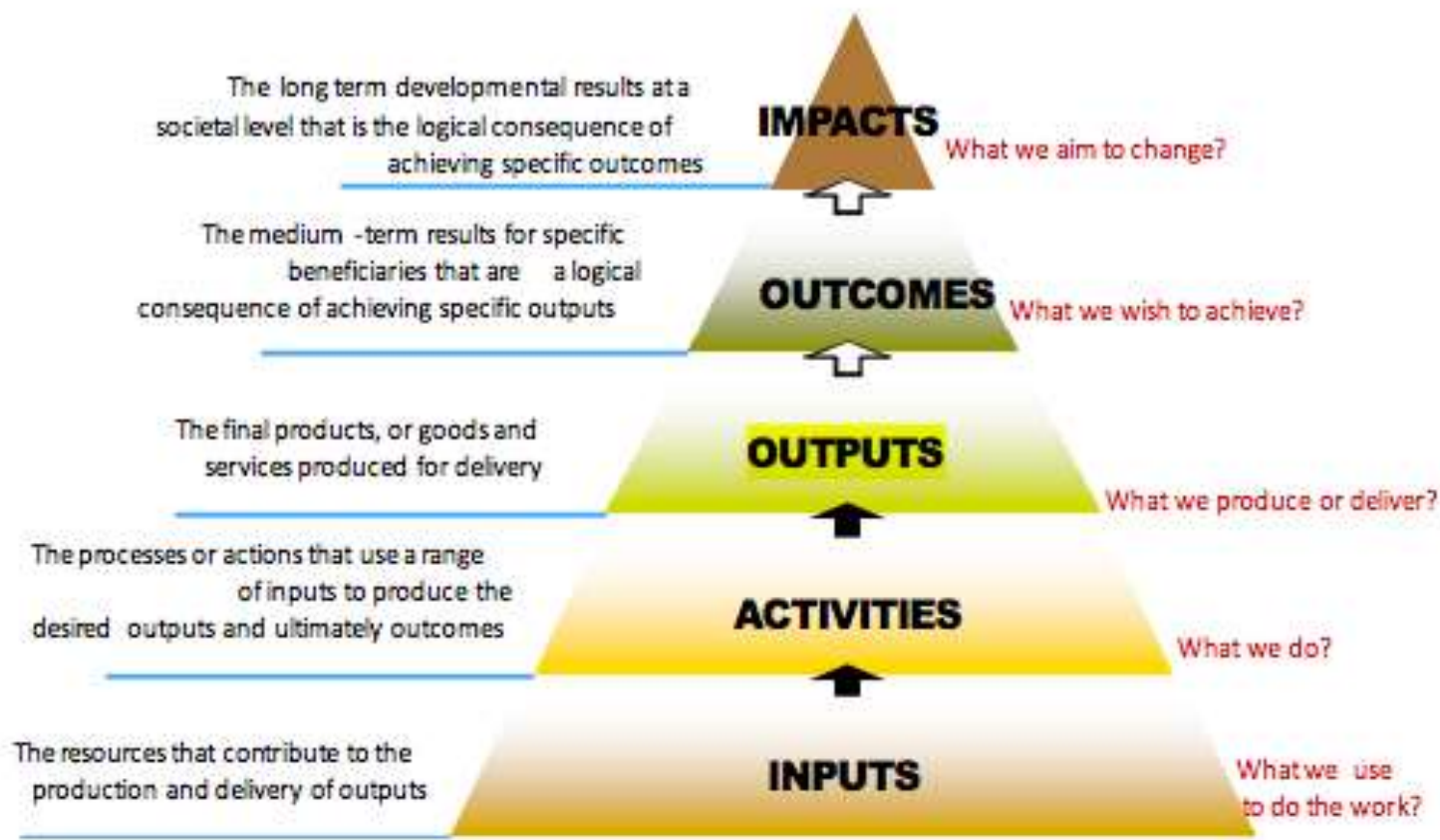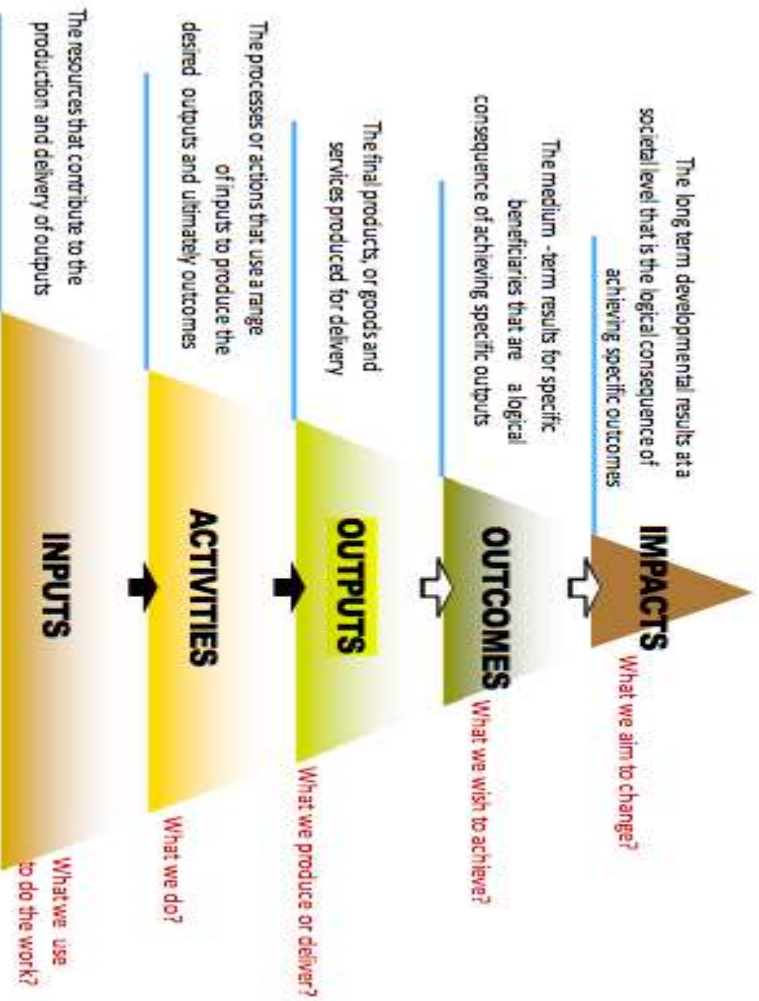Monitoring and Evaluation (M&E)
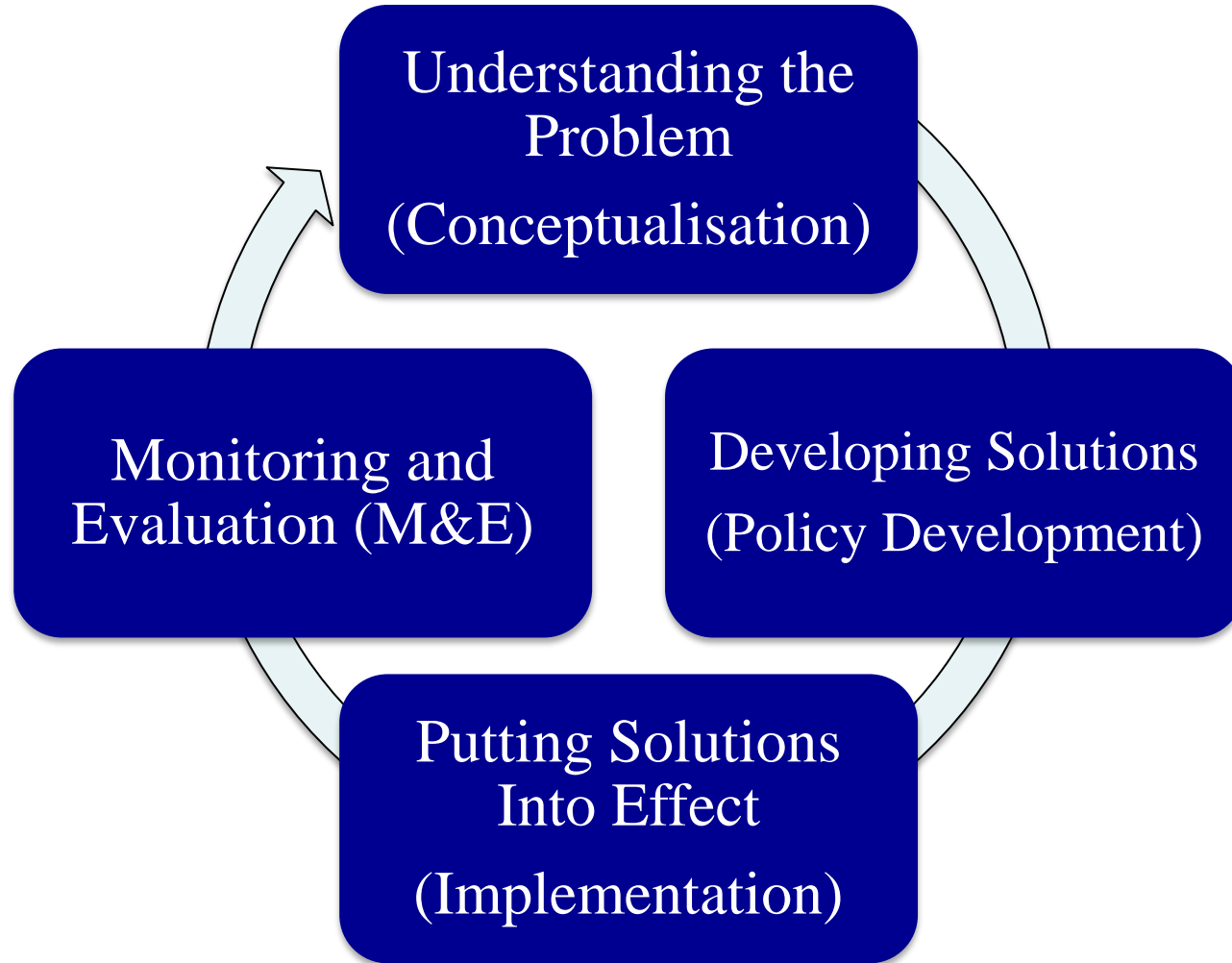
Evaluation:
Programme Theory/Theory of Change/Logic Model

- How is a policy/programme supposed to work?

- What activities, mechanisms, people have to be in place?

- And in what sequence – what is the causal chain?

- What resources are required – and are available?

- What data are required – and are available?

- Is the policy/programme feasible/achievable?

Building a Theory of Change: From Inputs to Outcomes

The long term developmental results at a societal level that is the logical consequence of achieving specific outcomes

IMPACTS

What we aim to change?

The medium -term results for specific beneficiaries that are a logical consequence of achieving specific outputs

OUTCOMES

What we wish to achieve?

The final products, or goods and services produced for delivery

OUTPUTS

What we produce or deliver?

The processes or actions that use a range of inputs to produce the desired outputs and ultimately outcomes

ACTIVITIES

What we do?

The resources that contribute to the production and delivery of outputs

INPUTS

What we use to do the work?

The resources that contribute to the production and delivery of outputs

The processes or actions that use a range of inputs to produce the desired outputs and ultimately outcomes

The final products, or goods and services produced for delivery

The medium-term results for specific beneficiaries that are a logical consequence of achieving specific outputs

The long term developmental results at a societal level that is the logical consequence of achieving specific outcomes

INPUTS → **ACTIVITIES** → **OUTPUTS** ⇨ **OUTCOMES** ⇨ **IMPACTS**

What we use to do the work?

What we do?

What we produce or deliver?

What we wish to achieve?

What we aim to change?

Constituent Features of a Theory of Change

Inputs → Activities → Mechanisms → People/Agencies → Outputs → Outcomes → Impacts

Constituent Features of a Theory of Change

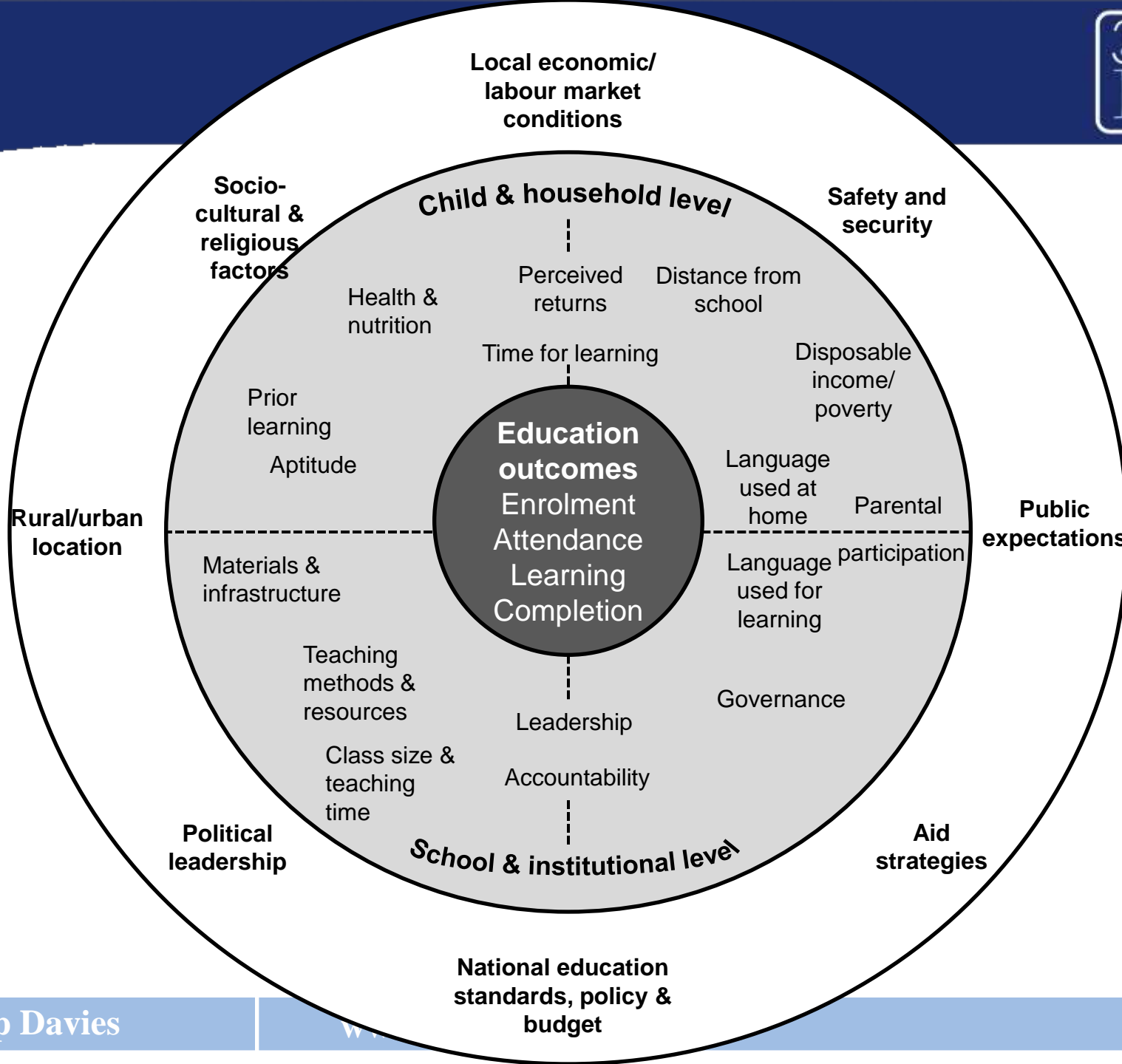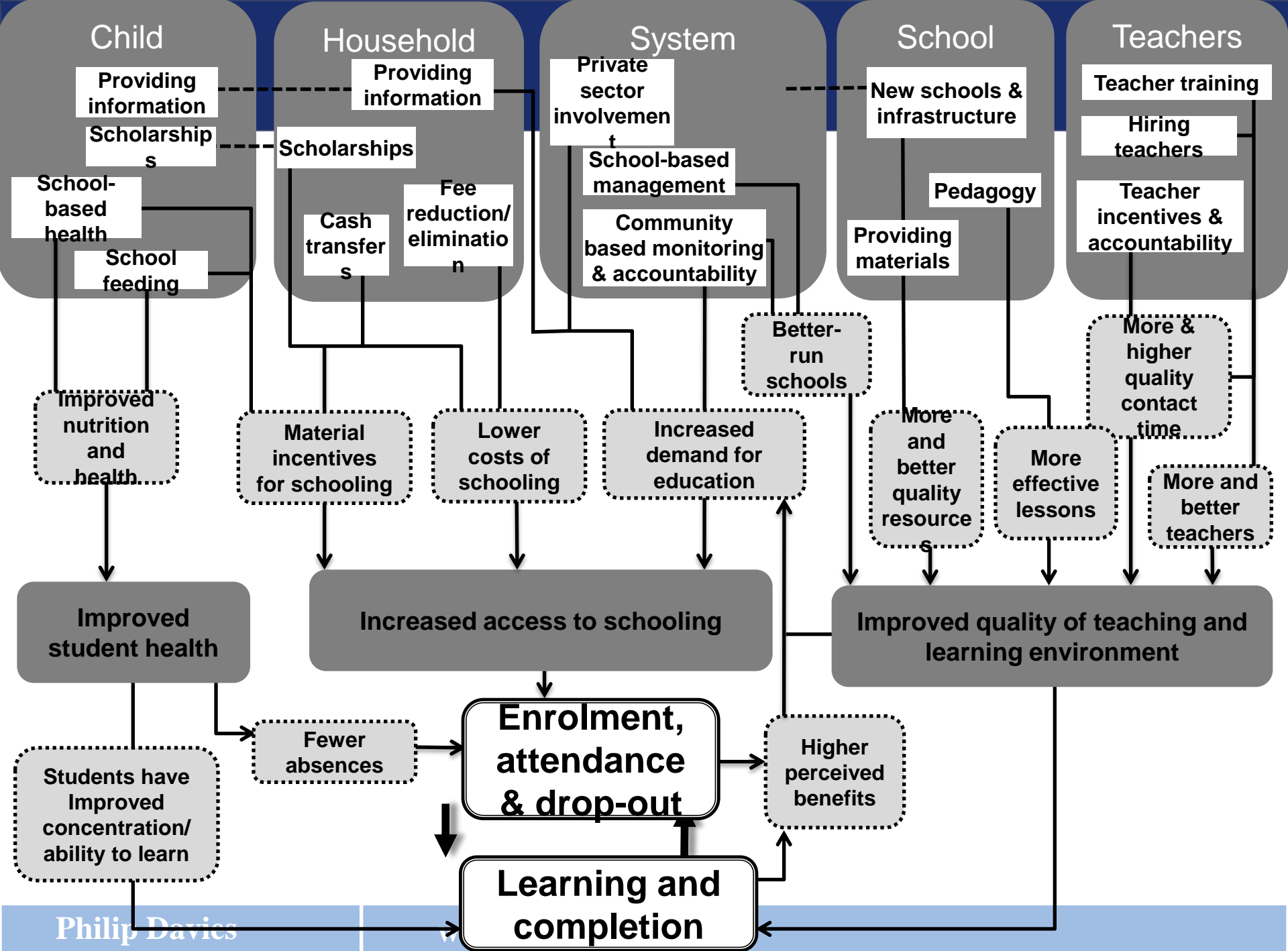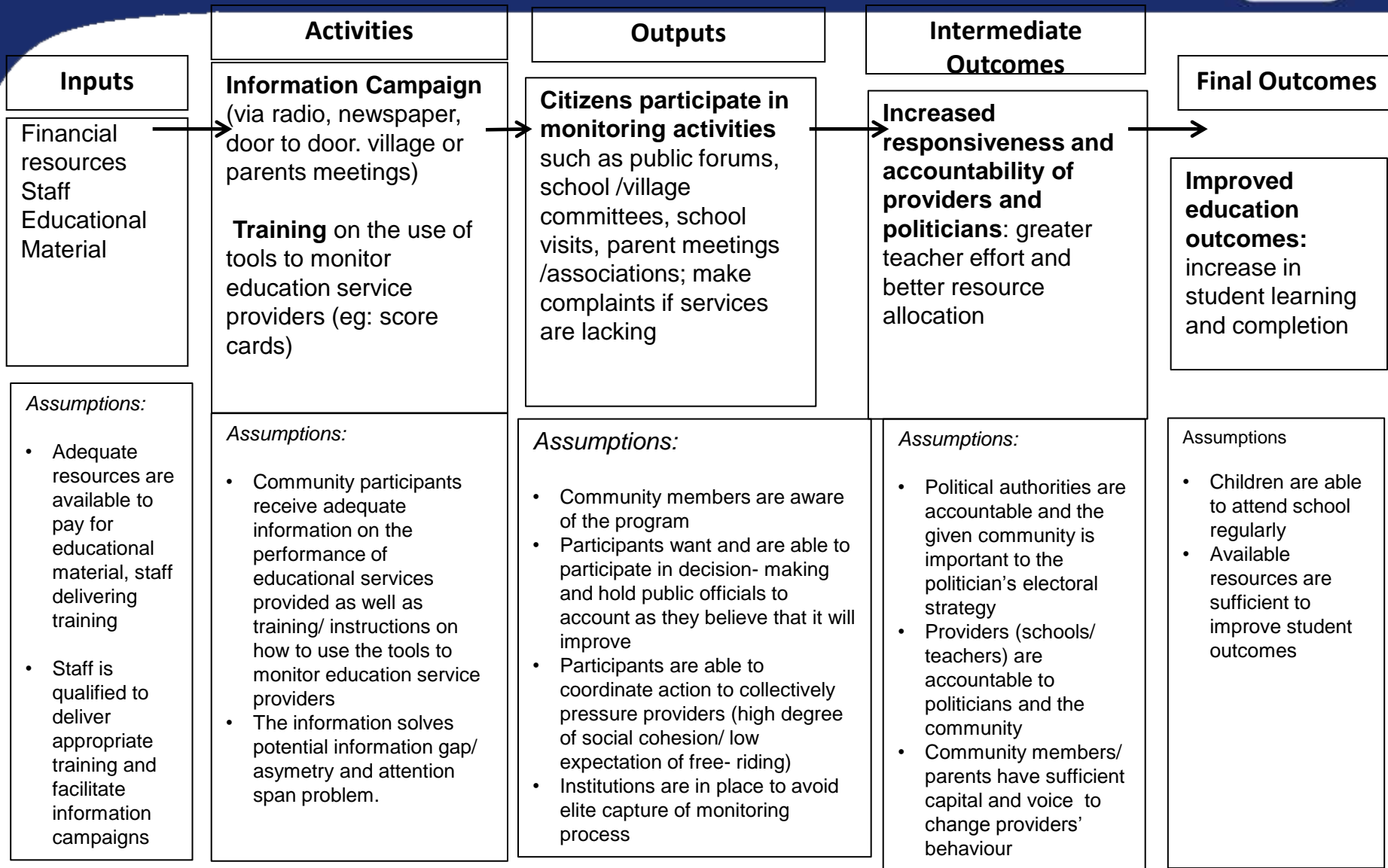|	
Impacts	What we change: Net effects over status quo
↑	
Outcomes	What we achieve: Attainment, health status
↑	
Outputs	What we produce: Schools, teachers, hospitals
↑	
People/Agencies	Who does it: Govnt, private sector, civil society
↑	
Mechanisms	How we do it: Markets, state, regulation, etc
↑	
Activities	What we do: Delivery plans, operations
↑	
Inputs	What we use: Problem ID, priorities, resources

Establishing the Policy Logic/Theory of Change Basic Principles

- Map out the causal chain

- Understand context

- Anticipate heterogeneity

- Rigorous evaluation of impact using an appropriate counterfactual

- Rigorous factual analysis

- Use mixed methods

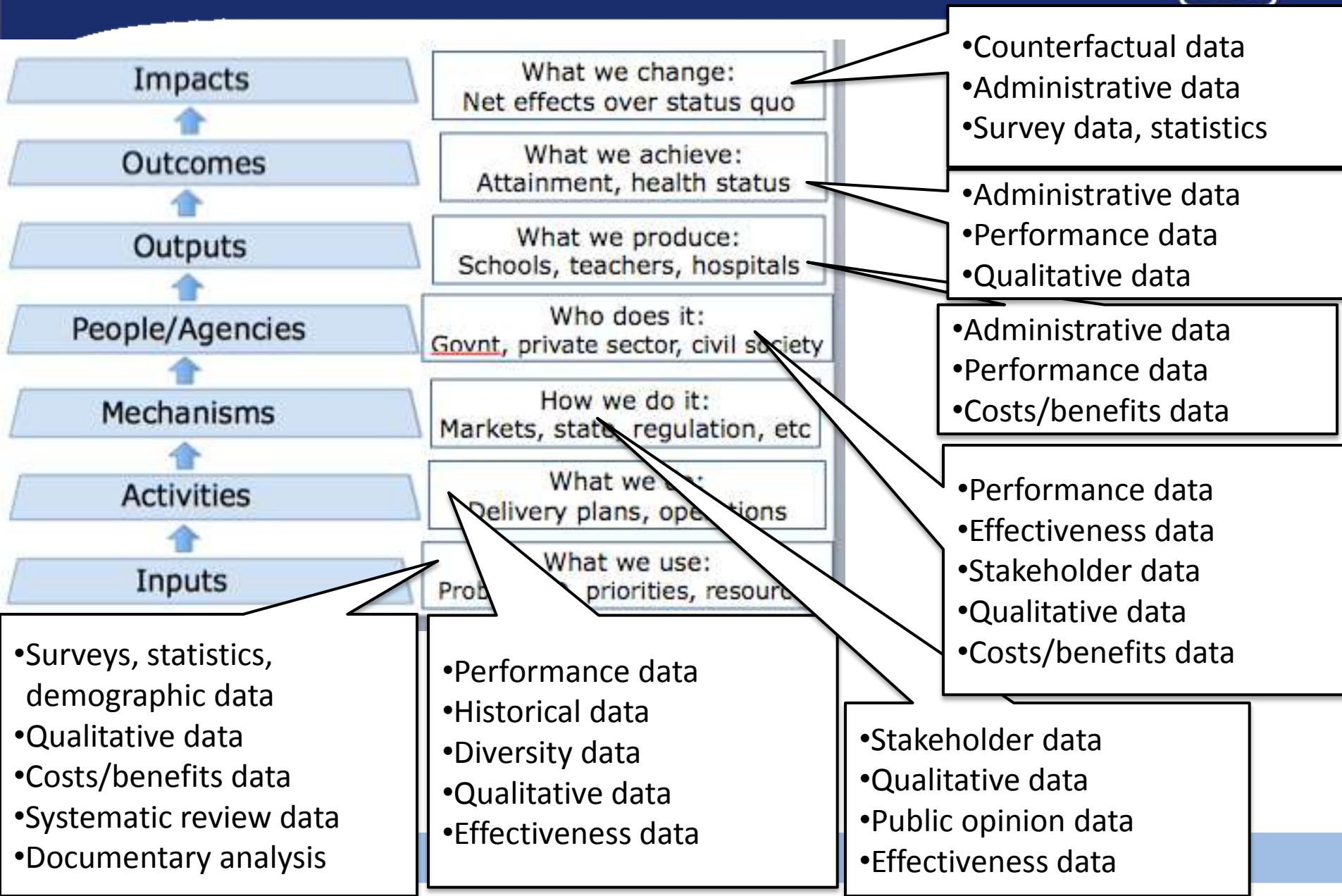# Example: Using program theories for SR of education interventions

Child

Providing information

Scholarships

School-based health

School feeding

Improved nutrition and health

Improved student health

Students have Improved concentration/ ability to learn

Household

Providing information

Scholarships

Cash transfers

Fee reduction/ elimination

Material incentives for schooling

Lower costs of schooling

Increased access to schooling

Fewer absences

System

Private sector involvement

School-based management

Community based monitoring & accountability

Better-run schools

Increased demand for education

School

New schools & infrastructure

Pedagogy

Providing materials

More and better quality resources

More effective lessons

Teachers

Teacher training

Hiring teachers

Teacher incentives & accountability

More & higher quality contact time

More and better teachers

Improved quality of teaching and learning environment

Enrolment, attendance & drop-out

Higher perceived benefits

Learning and completion

Inputs	Activities	Outputs	Intermediate Outcomes	Final Outcomes
Financial resources Staff Educational Material	**Information Campaign** (via radio, newspaper, door to door. village or parents meetings) **Training** on the use of tools to monitor education service providers (eg: score cards)	**Citizens participate in monitoring activities** such as public forums, school /village committees, school visits, parent meetings /associations; make complaints if services are lacking	**Increased responsiveness and accountability of providers and politicians**: greater teacher effort and better resource allocation	**Improved education outcomes:** increase in student learning and completion

Assumptions:

- Adequate resources are available to pay for educational material, staff delivering training

- Staff is qualified to deliver appropriate training and facilitate information campaigns

Assumptions:

- Community participants receive adequate information on the performance of educational services provided as well as training/ instructions on how to use the tools to monitor education service providers
- The information solves potential information gap/ asymetry and attention span problem.

Assumptions:

- Community members are aware of the program
- Participants want and are able to participate in decision- making and hold public officials to account as they believe that it will improve
- Participants are able to coordinate action to collectively pressure providers (high degree of social cohesion/ low expectation of free- riding)
- Institutions are in place to avoid elite capture of monitoring process

Assumptions:

- Political authorities are accountable and the given community is important to the politician's electoral strategy
- Providers (schools/ teachers) are accountable to politicians and the community
- Community members/ parents have sufficient capital and voice to change providers' behaviour

Assumptions

- Children are able to attend school regularly
- Available resources are sufficient to improve student outcomes

Exercise 1

- Develop a program theory for your selected intervention, identifying key inputs, activities, outputs, intermediate and final outcomes.

- Identify assumptions associated with each stage of the causal chain

Testing the ToC

What types of data/ information do you need to test the program theory of change?

Theories of Change – Data Required

Level	Description
Impacts	What we change: Net effects over status quo
Outcomes	What we achieve: Attainment, health status
Outputs	What we produce: Schools, teachers, hospitals
People/Agencies	Who does it: Govnt, private sector, civil society
Mechanisms	How we do it: Markets, state regulation, etc
Activities	What we do: Delivery plans, operations
Inputs	What we use: Problems, priorities, resources

Impacts:
- Counterfactual data
- Administrative data
- Survey data, statistics

Outcomes:
- Administrative data
- Performance data
- Qualitative data

Outputs:
- Administrative data
- Performance data
- Costs/benefits data

People/Agencies:
- Performance data
- Effectiveness data
- Stakeholder data
- Qualitative data
- Costs/benefits data

Mechanisms:
- Stakeholder data
- Qualitative data
- Public opinion data
- Effectiveness data

Activities:
- Performance data
- Historical data
- Diversity data
- Qualitative data
- Effectiveness data

Inputs:
- Surveys, statistics, demographic data
- Qualitative data
- Costs/benefits data
- Systematic review data
- Documentary analysis

Unpacking the theory of change of an education intervention

Radhika Menon

International Initiative for Impact Evaluation

Enhancing learning in India

This 3ie supported impact evaluation was conducted in **Mahendragarh and Kurukshetra districts** of Haryana, India.

Researchers from J-PAL collaborated with the Government of Haryana.

Impact evaluation of two interventions:

- Continuous and Comprehensive Evaluation system (CCE)
- Learning Enhancement Programme (LEP)

Mainly looked at impact on children in grades 1-4

Photo © Haryana_in_India/wikimedia

Duflo, E, Berry, J, Mukerji, S and Shotland, M, 2014. *A Wide Angle View of Learning: evaluation of the CCE and LEP Programmes in Haryana*, 3ie Impact Evaluation Report

Continuous and Comprehensive Evaluation

The Right to Education Act (2009) eliminated 'high stake' final exams.

Continuous and Comprehensive Evaluation emphasises:

❖ Frequent and broad based feedback on student performance
❖ Assessment of academic and non-academic performance
❖ Variety of techniques to assess performance

Photo © Yann/wikimedia

Photo © Chris hand/Flickr

Learning Enhancement Programme

Developed by **Pratham**, a large Indian NGO focussing on basic literacy and numeracy

❖ Programme involves quick oral assessment of students
❖ Classes are regrouped according to learning level rather than grade.

Story

Paragraph

Word

Letter

भाषा

Beginner

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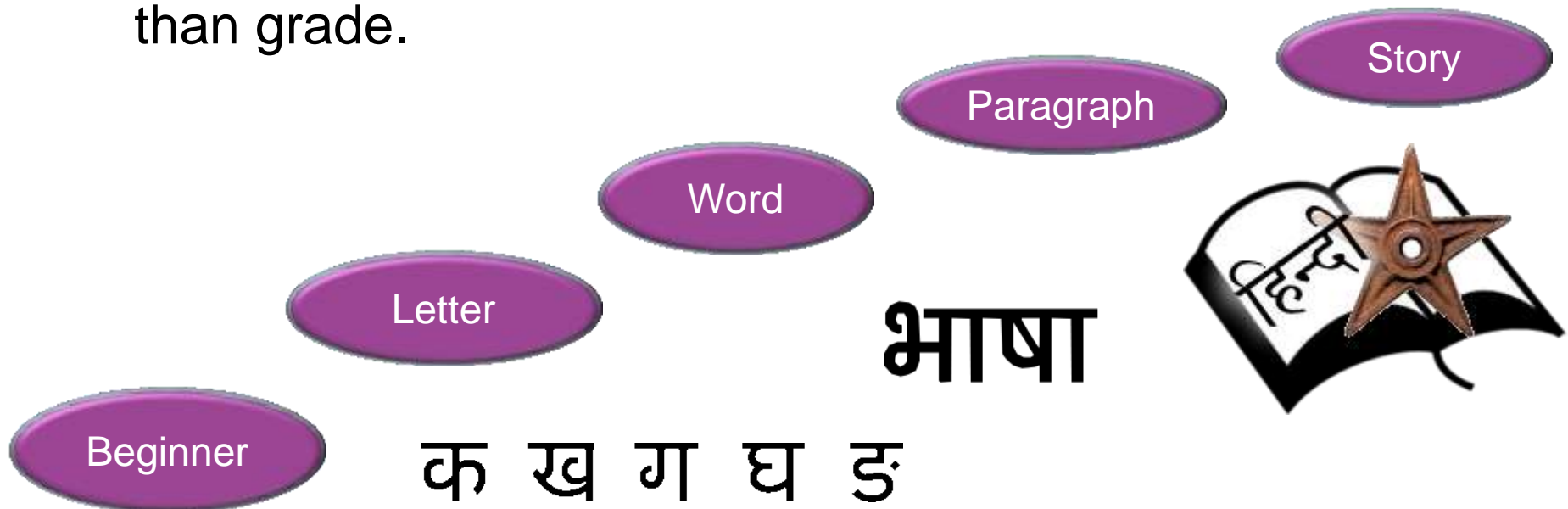
Process monitoring

On the request of the government, researchers revived school monitoring system.

The system includes block and district supervisors, field level monitors.

Monitoring consisted of

❖ Surprise visits to each of the schools

❖ Extensive questionnaires on implementation, availability of inputs such as text books and uniforms

Photo © Ray witlin/WB

❖ Observations of randomly selected teacher in the classroom

Research questions

- Does Continuous and Comprehensive Evaluation improve test scores in Hindi and Maths?

- Does the Learning Enhancement Programme improve test scores in Hindi and Maths?

- Does a combination of both improve test scores in Hindi and Maths?

Photo © Counterclockwise/Flickr, Magic Pathshala.com

Randomised Controlled Trial

400 schools

| 100 CCE schools | 100 LEP schools | 100 CCE+LEP schools | 100 schools in control group |

Results

❖ Students in CCE schools did not perform significantly better than students in control schools.

Photo © Jose Antonio Marcillo Valenciano/Flickr

❖ LEP had a large, positive and statistically significant effect on students' basic Hindi reading abilities, both oral and written tests.

❖ LEP had a larger effect for girls than boys.

Photo © JPAL SA

❖ Combining LEP and CCE had no significant effect on test scores relative to the LEP programme alone.

Photo © Jose Antonio Marcillo Valenciano/Flickr

Why didn't CCE work?

Process monitoring showed:

- CCE training did not lead to change in teaching practices.

- School headmasters thought requirements to be burdensome and time consuming. Guidelines were unclear

- Overall, CCE not well implemented.

- LEP on the other hand had a high level of compliance and was well implemented

CCE Theory of Change

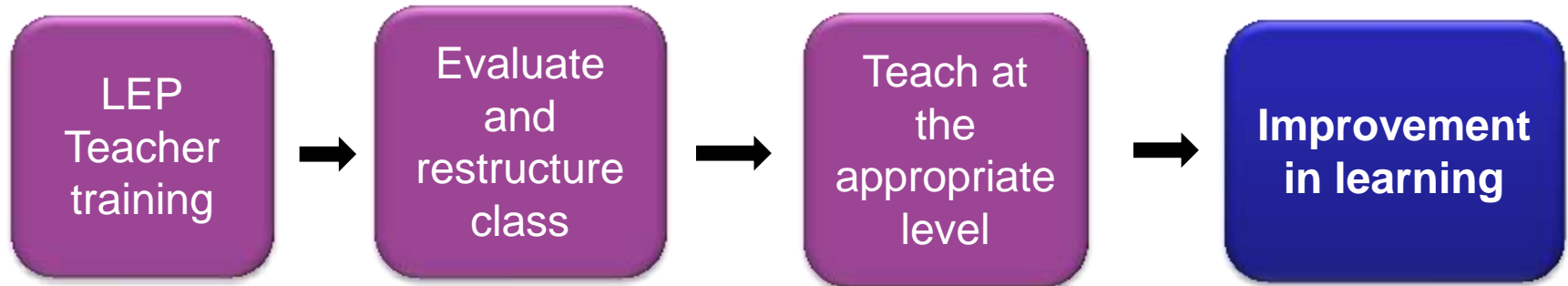| CCE Teacher training | → | Frequent evaluation of students | → | Customised teaching approach | → | **Improvement in learning** |
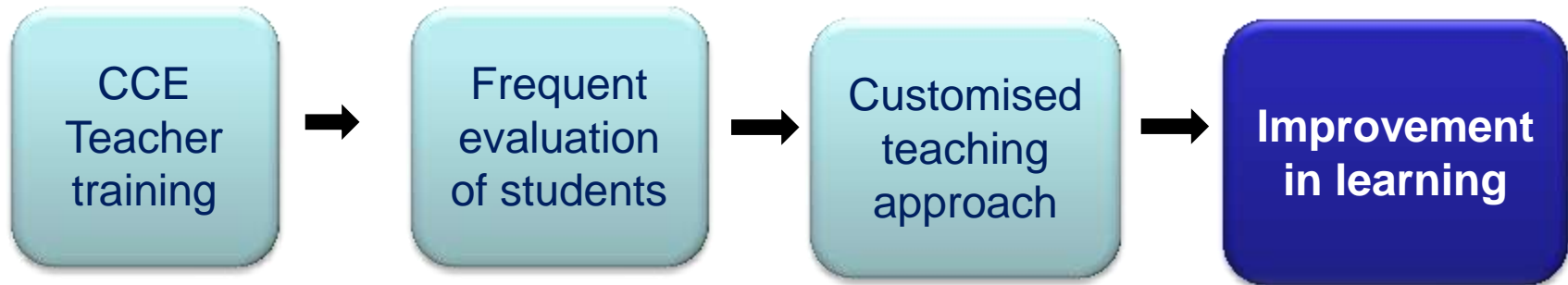
Assumptions not met

Teacher training is adequate.

Teachers have time and resources to implement.

Teachers have pedagogical tools.

Teachers attend training

LEP Theory of Change


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┌──────────────┐     ┌──────────────┐     ┌──────────────┐     ┌──────────────┐
│     LEP      │     │   Evaluate   │     │   Teach at   │     │              │
│   Teacher    │ ──▶ │     and      │ ──▶ │     the      │ ──▶ │ Improvement  │
│   training   │     │  restructure │     │  appropriate │     │ in learning  │
│              │     │    class     │     │    level     │     │              │
└──────────────┘     └──────────────┘     └──────────────┘     └──────────────┘
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Assumptions met in most part

Teacher training is adequate.

Teachers have time and resources to implement.

Teachers have pedagogical tools.

Teachers attend training
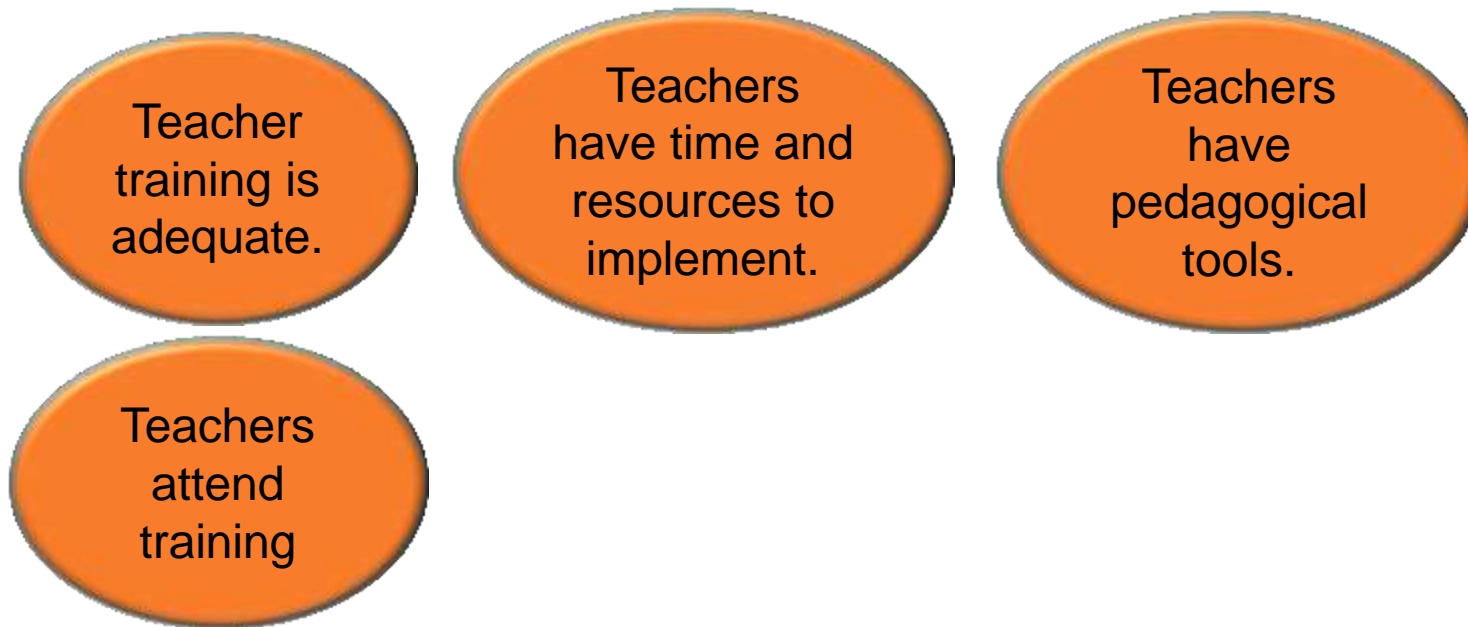
Key takeaways

- Process monitoring helped collect data along the causal chain

- Process monitoring is important for implementation

- It helped answer the question of 'why' the programme worked or did not work

- Theory of change maximises the value of research for policy and practice

Exercise 2

- Identify questions that would allow you to test the program theory

- What type of data would you need?

Thank you
Radhika Menon, Birte Snilstveit, Philip Davies on

Email: pdavies@3ieimpact.org

+44 (0)207 958 8350

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