

# International course on: Public Expenditure Tracking Surveys in Education

(Phnom Penh: 21-30 June 2004)

Cambodia, Kenya, Laos, Mongolia



THE WORLD BANK



A first international course on “*Public expenditure tracking surveys (PETS) in education*” was organised jointly by the International Institute for Educational Planning (IIEP) and the World Bank Institute (WBI), from 21 to 30 June 2004 in Phnom Penh.

Hosted by the Government of Cambodia, this course aimed at introducing participants to the methods of PETS; allowing them to practically implement a PETs through an exercise (Ruritania); and discussing how this methodology can be applied to the situation in their respective countries.

This report includes the various materials that were prepared and used for the course, in particular: the outlines of the presentations by the faculty, the Ruritania exercise, as well as the reports by country teams. The appendices contain the speeches during the official opening ceremony, the list of participants as well as some bibliographical references.

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## COURSE AGENDA

### 21 – 30 June, 2004

Day One	INTRODUCTION	
8:30 – 9:30	Official Opening: Welcome Remarks by <ul style="list-style-type: none"> <li>- H.E. Im Sethy, Secretary of State, Ministry of Education, Youth and Sport, Cambodia</li> <li>- Mr. Etienne Clement, Representative of UNESCO Phnom Penh</li> <li>- Mr. Robert Talercio, Senior Economist, The World Bank, Cambodia Country Office</li> </ul> Opening and Keynote Speech by H.E. Keat Chhon, Senior Minister and Minister of Economy and Finance, Cambodia	
9:30 – 10:15	Introduction to the course; introduction of course participants	Jacques Hallak [JH], Muriel Poisson [MP] & Don Winkler [DW]
10:30 – 12:00	<i>Lecture:</i> Resource leakage and corruption in education.	MP & JH
1:30 – 4:00	<i>Lecture:</i> An overview of PETS—rationale, design, data collection, analysis, dissemination, impact.	Ritva Reinikka [RR]
4:00 – 5:00	<i>Show and tell:</i> Has your country already prepared a PETS? If yes, explain how it has been organized, its results and your views about it. What are the main questions (maximum 3) that you would like a PETS to help clarify in your country? (It could be either a first or second survey).	MP & JH
Day Two	INTRODUCTION (continued)	
8:30 – 10:00	<i>Lecture:</i> The impacts of PETS on education.	M. Ojoo [MO]
10:30 – 12:00	<i>Lecture:</i> Multi-purpose school surveys [QSDS]	RR
1:30 – 3:30	<i>Lecture</i> on the organization of decision-making in education.	DW
4:00 – 5:00	Country team meeting: How is education resource decision making organized in our country?	

<b>Day Three</b>	<b>Section 1: PETS Preparation</b>	
8:30 – 9 :30	Ruritania Exercise: Introduction	MP & JH
9 :30 – 10 :00	<i>Mini-Lecture</i> on identifying the objectives and issues for the PETS.	MP & JH
10:30 – 12:00	Ruritania Exercise # 1.1: Group work on objectives and issues.	MP & JH
1:30 – 2:00	<i>Mini-Lecture</i> on specifying the sources and uses of funds in the sector.	DW
2:00 – 3:30	Ruritania Exercise # 1.2: Group work on resource flow and allocation.	DW
4:00 – 5:00	Country team meeting: What are the objectives of a PETS in our country? What policy issues do we wish to inform? How do we get the data?	
<b>Day Four</b>	<b>Section 2: PETS Design</b>	
8:30 – 9:00	<i>Mini-Lecture</i> on data quality and availability.	Mioko Saito [MS]
9:00 – 10:30	<i>Lecture</i> : Sampling	MS
10:30 – 12:00	Ruritania Exercise # 2.1 : Sampling	MS
1 :30 – 2 :00	<i>Mini-Lecture</i> on questionnaire design for data management.	Ivo Njosa [IN]
2 :00 – 3 :30	Ruritania Exercise # 2.2 : School questionnaire.	IN
4 :00 – 5 :00	Country team meeting: What are our data requirements? Which data are already available? Which questionnaires do we need to develop? What sampling framework is needed?	
<b>Day Five</b>	<b>Section 2 (continued)</b>	
8:30 – 10:00	<i>Lecture</i> : Government questionnaires.	MO & IN
10:00 – 12:00	Ruritania Exercise # 2.3 : DEO questionnaire	MO & IN
1:30 – 3:00	<i>Lecture</i> : The finance of public K-12 education: the flow of funds, incentives for efficiency with examples from Indonesia.	Prima Setiawan
3:30 – 5:00	Plenary Session: Team reports on Sections 1&2	

<b>Day Six</b>	<b>Section 3: Implementing Data Collection</b>	
8:30 – 9 :00	<i>Mini-Lecture</i> on organizing and managing the work.	MO
10:30 – 12 :00	Ruritania Exercise # 3.1 : Assessing local capacity and personnel required.	MO
1:30 – 2:00	<i>Mini-Lecture</i> on implementing school and government surveys and data processing.	IN and MO
2:00 – 3:30	Ruritania Exercise # 3.2. : Group work on implementing surveys and monitoring.	MO
4:00 – 5:00	Country team meeting: What is the composition of our PETS team? Which questionnaires do we need to develop? How and when should the survey work be done?	
<b>Day Seven</b>	<b>Section 3 (continued)</b>	
8:30 – 9:00	Mini-Lecture: Data entry and cleaning.	IN
9:00 – 10:30	Ruritania Exercise # 3.3 : Data entry and cleaning	
	<b>Section 4: Analysis, Reporting, and Dissemination.</b>	
11.00 – 12:00	<i>Lecture:</i> Analysis of QSDS	MO
1:30 – 2:00	<i>Mini-Lecture:</i> Data analysis of PETS—focus on leakage.	MP & JH
2 :00 – 4:00	Ruritania Exercise # 4.1&4.2 : Group work on analysis required to address the objectives and issues of the PETS.	MP
4:00 – 5:00	Country team meeting: What analysis is required to answer the issues addressed by the PETS in our country?	
<b>Day Eight</b>	<b>Section 4 (continued)</b>	
8:30 – 10:00	<i>Lecture:</i> Is PETS a reliable tool to remedy leakage and corruption?	MP & JH
10:30 – 11:00	<i>Mini-Lecture</i> on information dissemination	MO
10:30 – 12:00	Ruritania Exercise # 4.3.: Group work on reporting and dissemination strategy and plan.	MO
1:30 – 3:30	Plenary discussion of team reports on Sections 3 & 4	
4:00 – 5:00	Closing and course evaluation.	MP







Phnom Penh – June 2004

## RESOURCE LEAKAGE AND CORRUPTION IN EDUCATION

Jacques Hallak and Muriel Poisson

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### Introduction: recent examples of corruption in education

- *South Africa*: violating tendering processes
- *Pakistan*: fictitious schools, teachers, pupils
- *China*: illegal fees charged in many schools
- *USA*: many bogus e-mail colleges
- *Bangladesh*: many fictitious teachers
- *Italy*: selling exam questions in advance
- *Cameroon*: students pay to get good grades

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## Outline of the presentation

- I. What is corruption?
- II. Why tackle corruption now?
- III. What are the opportunities for corruption?
- IV. How to assess corruption?



## I. What is corruption?

*Definitions*

*Magnitude of corruption*



## I.1. General definition of corruption

- “The use of public office for private gains”  
Examples:
  - ▶ *diversion of funds from govt accounts*
  - ▶ *favouritism in personnel appointments*
- This definition applies to all public sectors
- Two categories of corruption
  - ▶ *according to rule* (payment for a legal act)
  - ▶ *against the rule* (payment for an illegal act)
- Where to draw the line between corrupt and honest behaviour?



## I.2. Levels of Corruption

- Grand corruption: high-level officials and politicians
  - ▶ *very large amounts of money*
  - ▶ *high economic impact*
- Petty corruption: public officers at all levels
  - ▶ *many small amounts of money*
  - ▶ *severe social impact, especially for the poor*
- Continuum from grand to petty corruption



### I.3. Causes of corruption

- Low salaries of public officials/teachers
- Discretionary power (monopoly)
- Poor governance/supervision at all levels
- Lack of absorption/management capacity
- Poor public information on govt decisions



### I.4. Definitions of corrupt practices

<b>Practices</b>	<b><i>Summary definitions</i></b>
Bribe, Pay-off	<i>Undue payment given to get a favour</i>
Bypass of criteria	<i>Non-use of legal criteria</i>
Capture, Leakage	<i>Illegal use of public resources</i>
Diversion of funds	<i>Illegal use of public resources</i>
Embezzlement	<i>Theft of public resources</i>
Misappropriation	<i>Illegal use of public resources</i>
Favouritism	<i>Illegal preference given to someone</i>
Fraud	<i>Any kind of corrupt practice</i>
Ghost worker	<i>Draws salary but does not work</i>
Nepotism	<i>Illegal preference given to a relative</i>
Traffic of influence	<i>Influencing a public decision for a bribe</i>



## I. 5. Magnitude of corruption

- World cost of corruption is estimated at US\$ 1 trillion out of a 30 trillion economy
- Two nation level estimates of corruption:
  - ▶ *Mexico: around 15 percent of GNP today*
  - ▶ *India: around 20 percent of GDP in 1980*
- The magnitude of corruption is usually measured by the way it is perceived
  - ▶ *Corruption Perception Index (CPI) published annually by Transparency International*



## II. Why tackle corruption now?

*International setting*

*Growing awareness*

*Sectoral dimensions*



## II.1. International setting

- International conventions against corruption:
  - ▶ *OECD Convention on combating bribery of foreign public officials, 1997*
  - ▶ *UN Convention against corruption, 2003*
- NORAD “Good Governance and Anti-corruption Action Plan 2000-2001”
- Good governance and anti-corruption programmes developed by the World Bank



## II.2. Growing awareness

- Links between corruption / poverty (PRSP), development and democracy established
- Various scandals: ENRON, Merrill Lynch, Arthur Andersen, etc.
- Wide diffusion of Ti Index\*



## The 2000 Corruption Perceptions Index

Country Rank	Country	2000 CPI Score	Surveys Used	Standard Deviation	High-Low Range
1	Finland	10.0	8	0.6	9.0 - 10.4
2	Denmark	9.8	9	0.8	8.6 - 10.6
3	New Zealand	9.4	8	0.8	8.1 - 10.2
	Sweden	9.4	9	0.7	8.1 - 9.9
5	Canada	9.2	9	0.7	8.1 - 9.9
80	Uganda	2.3	4	0.6	2.1 - 3.5
81	Mozambique	2.2	3	0.2	2.4 - 2.7
82	Kenya	2.1	4	0.3	2.1 - 2.7
	Russia	2.1	10	1.1	0.6 - 4.1
84	Cameroon	2.0	4	0.6	1.6 - 3.0
85	Angola	1.7	3	0.4	1.6 - 2.5
	Indonesia	1.7	11	0.8	0.5 - 3.2
87	Azerbaijan	1.5	4	0.9	0.6 - 2.5
	Ukraine	1.5	7	0.7	0.5 - 2.5
89	Yugoslavia	1.3	3	0.9	0.6 - 2.4
90	Nigeria	1.2	4	0.6	0.6 - 2.1

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## II.3. Sectoral dimensions

- Priority given by donors to education / pressure exerted by taxpayers
- High rate of return for investment in education
- Competition for access to jobs
  - ▶ *Academic fraud*
  - ▶ *Private tutoring*
- Development of ICTs
- Weakening of ethical norms?

*“Corruption is a major drain on the effective use of resources for education and should be drastically curbed”.*

*EFA, (Dakar, 2000)*

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### III. What opportunities for corruption?

*Some major practices  
of corruption in education*



#### III.1. Major practices of corruption in education

Areas	Corrupt practices	Impact on education
School building, rehabilitation	<ul style="list-style-type: none"> <li>• Fraud in public tendering</li> <li>• Embezzlement</li> <li>• School mapping</li> </ul>	Access Quality
Equipment, Textbooks, Food	<ul style="list-style-type: none"> <li>• Fraud in public tendering</li> <li>• Embezzlement</li> <li>• Bypass of criteria</li> </ul>	Equity Quality
Teacher appointment/management	<ul style="list-style-type: none"> <li>• Favouritism</li> <li>• Nepotism</li> <li>• Bribes</li> </ul>	Quality
Teacher behaviour	<ul style="list-style-type: none"> <li>• “Ghost teachers”</li> <li>• Bribes (for school entrance, exams, assessment, private tutoring, etc.)</li> </ul>	Equity Ethics
Examinations and diplomas	<ul style="list-style-type: none"> <li>• Selling of information</li> <li>• Favouritism</li> <li>• Nepotism</li> <li>• Bribes</li> <li>• Academic fraud</li> </ul>	Equity Ethics
Information systems	<ul style="list-style-type: none"> <li>• Manipulating data</li> <li>• Selecting/suppressing information</li> </ul>	Equity Ethics Policy priorities
Specific allowances (fellowships, subsidies, etc.)	<ul style="list-style-type: none"> <li>• Favouritism</li> <li>• Nepotism</li> <li>• Bribes</li> <li>• Bypass of criteria</li> </ul>	Access Equity
Finance	<ul style="list-style-type: none"> <li>• Transgressing rules/procedures</li> <li>• Inflation of costs and activities</li> <li>• Opacity of flow</li> </ul>	Access Quality Equity Policy priorities





## III.2. School building/equipment/food...

Areas	Corrupt practices	Impact on education
School building, rehabilitation	Fraud in public tendering Embezzlement School mapping	Access Quality
Equipment, Textbooks, Food	Fraud in public tendering Embezzlement Bypass of criteria	Equity Quality

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## Production and distribution of textbooks

Background	Forms of malpractice	Scope (Philippines)
<ul style="list-style-type: none"> <li>- Deterioration of quality (textbooks and teaching materials are critical determinants)</li> <li>- Non-salary expenditures affected by budget cuts (including textbooks availability)</li> <li>- Very low textbook/pupil ratio (sometimes less than 1/1 in Sub Saharan Africa)</li> <li>- IFIs concerns (including development banks)</li> <li>- Lack of national book policies</li> </ul>	<p>At each stage of the book production and distribution chain:</p> <ul style="list-style-type: none"> <li>- <i>raw materials (papers)</i>: lack of transparency of purchase rules</li> <li>- <i>writing (authors)</i>: lack of clear policy on copyright (particularly in the public sector)</li> <li>- <i>production/printing</i>: often supported by IFIs: distortion in procurement rules</li> <li>- <i>distribution and storage</i>: using public/ private (monopolistic or/and informal ) networks; lack of transparent criteria for costing</li> <li>- <i>purchase</i>: different formulae of financing (free/non free ; collection of funds; multi-use of textbooks)</li> </ul> <p>Particular difficulties for imported textbooks.</p>	<ul style="list-style-type: none"> <li>- Payoffs eat up 20 to 65% of textbook funds</li> <li>- Of the P100-million pork barrel or Countrywide Development Fund legislators spent on supplementary materials in 1997, up to P65 million to bribes</li> <li>- That amount could have bought a million more textbooks</li> </ul>

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### III.3. Teacher management and behaviour

Areas	Corrupt practices	Impact on education
<b>Teacher appointment/management</b>	Favouritism Nepotism Bribes	Quality
<b>Teacher behaviour</b>	Ghost teachers Bribes (for school entrance, exams, assessment), private tutoring	Equity Ethics

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### Private tutoring

Background	Forms of malpractice	Scope
<ul style="list-style-type: none"> <li>- Excessive requirement to pass a grade</li> <li>- Classroom teaching inadequate for passing exams</li> <li>- Systems intolerant of slow learners</li> <li>- University exams have "a gate-keeping function"</li> <li>- Evaluation of teachers made through their pupils' results</li> </ul> <p>▶▶ Private tutoring*</p>	<ul style="list-style-type: none"> <li>- Teachers neglecting their mainstream duties in favour of tutorial work</li> <li>- Use of public facilities for private interests</li> <li>- Non-transparent criteria for teacher deployment</li> <li>- Pressure exerted on parents to pay for private tuition</li> <li>- Distortion in the way the curriculum is taught e.g. teaching of only half the syllabus during official hours</li> <li>- Penalisation of pupils who do not attend private tutoring (including their deliberate failing)</li> </ul>	<ul style="list-style-type: none"> <li>- Brazil: In Rio de Janeiro, 50% of students receive tutoring</li> <li>- Egypt: 65% of urban primary children and 53% of those in rural ones receive tutoring</li> <li>- Japan: 24% of elementary pupils and 60% of secondary pupils attend <i>juku</i></li> <li>- Mauritius: 78% of Grade 6 pupils receive extra lessons</li> <li>- Tanzania: In a Dar es Salaam school, 70% of Grade 6 pupils receive tutoring</li> </ul>

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### III.4. Examinations and information systems

Areas	Corrupt practices	Impact on education
<b>Examinations and diplomas</b>	Selling information Favouritism Nepotism Bribes Academic fraud	Equity Ethics
<b>Information systems</b>	Manipulating data Selecting/suppressing information	Equity Ethics Policy priorities



### Fighting academic fraud

Background	Forms of malpractice	Scope
<ul style="list-style-type: none"> <li>- Low salaries of examination officers</li> <li>- Assessment of teachers/schools linked to students' success</li> <li>- Development of ICTs (fax, computers, etc.)</li> <li>▶ Academic fraud*</li> </ul>	<p>Areas covered by academic fraud: exams, credentials, diploma mills, plagiarism, research, academic journals and publications</p> <p>Example of exams:</p> <ul style="list-style-type: none"> <li>- leakage</li> <li>- test preparation</li> <li>- impersonation</li> <li>- external assistance</li> <li>- smuggling of foreign materials</li> <li>- copying</li> <li>- collusion</li> <li>- intimidation</li> <li>- substitution of scripts</li> <li>- improper assignment</li> <li>- ghost centres</li> <li>- marker malpractices</li> </ul>	<ul style="list-style-type: none"> <li>- USA: 15 to 25% of candidates admitted having cheated</li> <li>- Bangladesh, India, Pakistan: Majority of candidates</li> <li>- In some countries, examination corruption has become a business (paper mills: <a href="http://www.cheathouse.com">www.cheathouse.com</a>, diploma mills: <a href="http://www.fakedegrees.com">www.fakedegrees.com</a>)</li> </ul>



### III.5. Specific allowances / finance

Areas	Corrupt practices	Impact on education
Specific allowances (fellowships, subsidies, illegal fees, etc.)	Favouritism Nepotism Bribes Bypass of criteria	Access Equity
Finance	Transgressing rules/procedures Inflation of costs and activities Opacity of flow	Access Quality Equity Policy priorities

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### Financial leakage

- *Slovakia*: examples of misuse: 100 000 Sk in one university and 357 260 Sk in another university
- *State of Victoria (Australia)*: \$ 7.7 million of error in the financing of education, detected through audit in 2002
- *United Kingdom*: Embezzlement of a school budget by a headteacher amounting to £ 500 000 in one LEA in 2003
- *Bangladesh*: Illegal fees in eight districts amount to about BDT 20 million

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## IV. How to assess corruption?

*Perceptions at international level*

*Common perceptions at local level*

*Recent changes in perception*

*Need for objective assessment*

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### IV.1. Corruption Perception Index (CPI)

- Degree to which corruption is perceived to exist among public officials and politicians
- Reflects perception of business people, academics and risk analysts
- Composite index, drawing on different polls from independent institutions
- CPI=10: highly clean; 0: highly corrupt

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## IV.2. Perception at international level (TI)

- Among the 133 countries analyzed in 2003, the median score was 3.4
- High levels of corruption in many rich countries as well as poorer ones
- 7 out of 10 countries score less than 5 out of a clean score of 10
- 5 out of 10 developing countries score less than 3



## IV.3. Common perceptions of corruption at local level

- Everybody knows, everybody is implicated
- Nobody mentions it openly
- A normal way of doing things
  - ▶ *in some cultures, a gift is not a corrupt practice*
- Greasing the wheel
- Nothing much can be done: fatalism
- Just a form of mismanagement



#### IV.4. Recent changes in perception of corruption

- Less taboo than it used to be in many countries
  - ▶ *high-level political commitment to fight corruption*
  - ▶ *public opinion understands the damage done by corruption: Thailand, Indonesia*
- International agencies/development banks have adopted anti-corruption approach



#### IV.5. Need for objective assessment

- Limit of “subjective” data
- Lack of “objective”/quantitative data
- Collection of quantified data through:
  - ▶ audits (sector/institutions)
  - ▶ Multiple indicators: QSDS
  - ▶ PETS

➔ *Importance of this course...*



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▶ **VISIT OUR INFORMATION PLATFORM,  
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<http://www.unesco.org/iiep/eng/focus/etico/etico1.html>



# Public Expenditure Tracking Surveys in Education

Ritva Reinikka

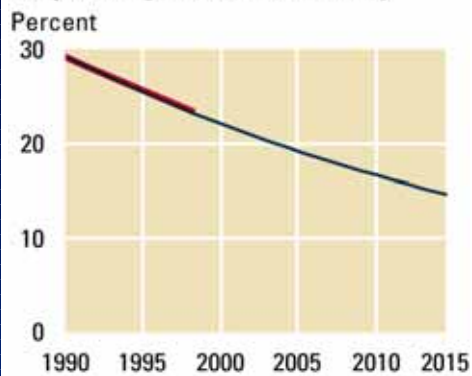
Development Research Group

World Bank

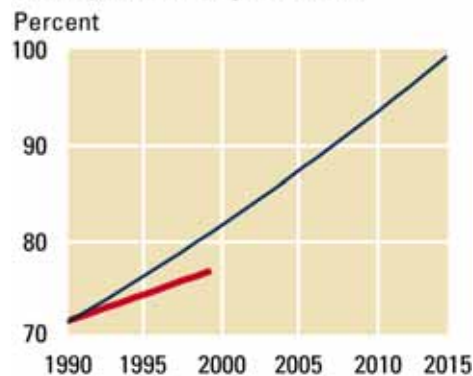
June 21 2004

## MDGs—Global aggregates

**Eradicate poverty and  
People living on less than \$1 a day**



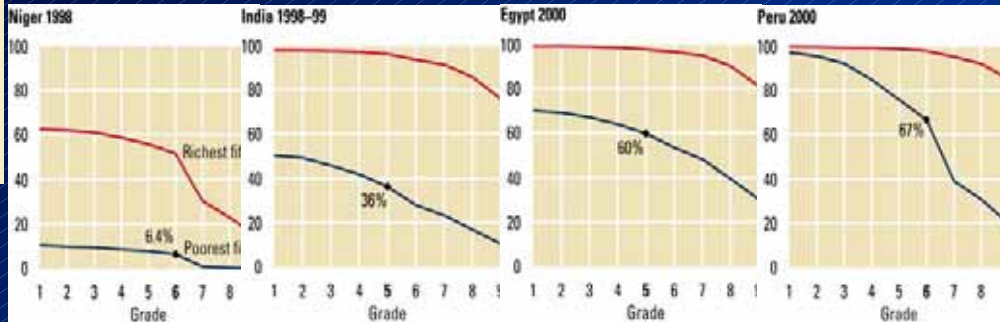
**Universal primary education  
Primary school completion rate**



Source: [www.developmentgoals.org](http://www.developmentgoals.org)

## Outcomes are worse for poor people

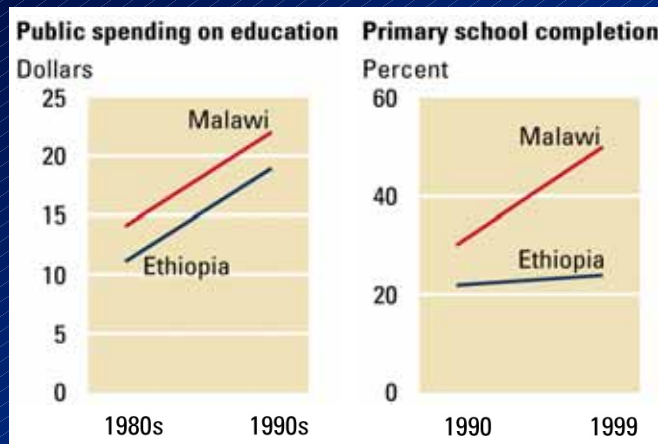
Percent aged 15 to 19 completing each grade or higher



Source: Analysis of Demographic and Health Survey data

3

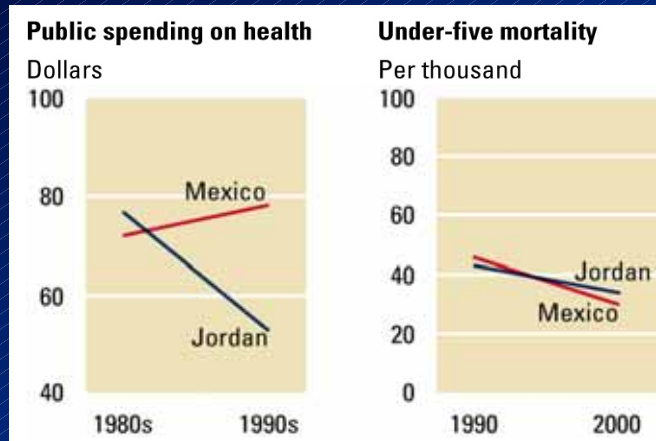
Similar changes in public spending can be associated with vastly different changes in outcomes...



Sources: Spending data from World Development Indicators database. School completion from Bruns, Mingat and Rakatomalala 2003

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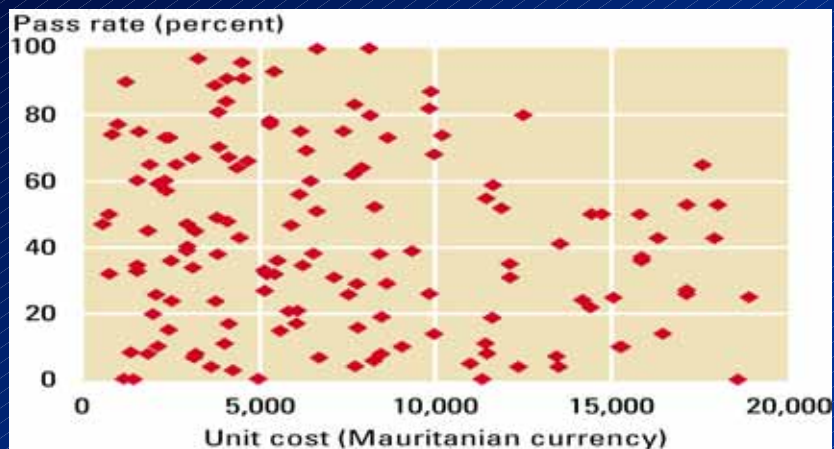
...and vastly different changes in spending can be associated with similar changes in outcomes.



Sources: Spending data for 1990s from World Development Indicators database. Child mortality data from UNICEF 2002. Other data from World Bank staff

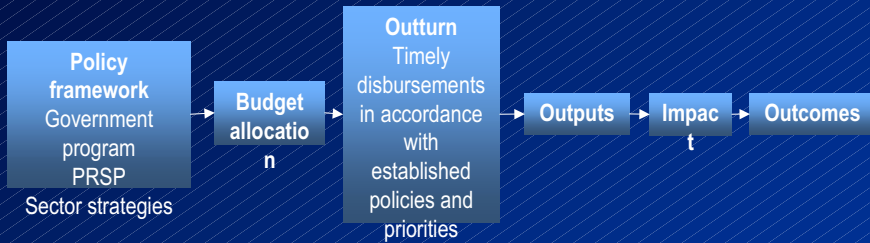
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Unit cost and performance in primary education: Mauritania

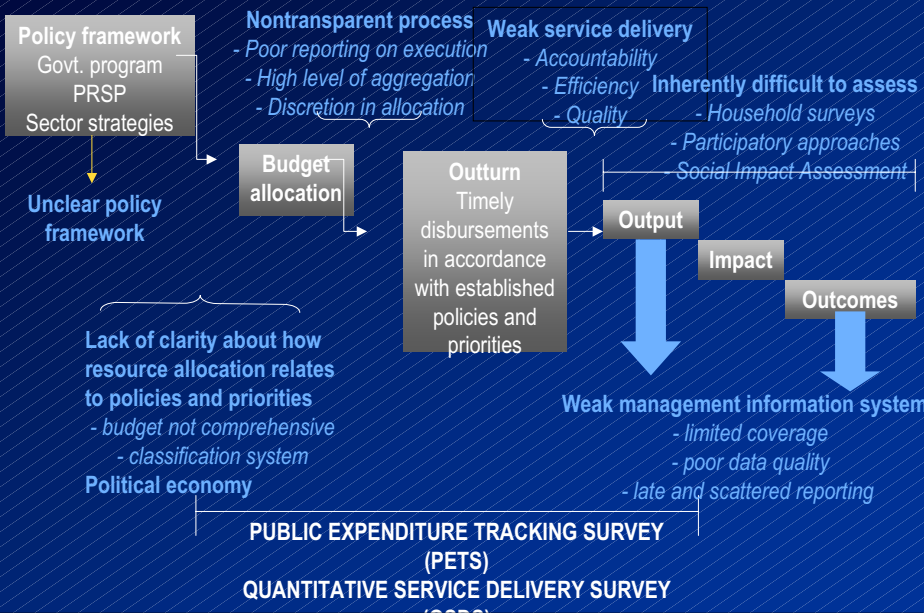


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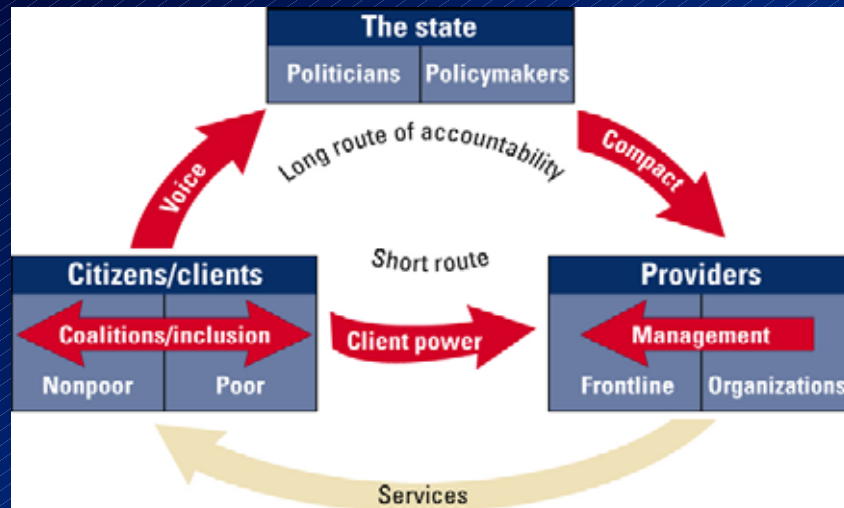
# The ideal situation...



# A more typical situation...

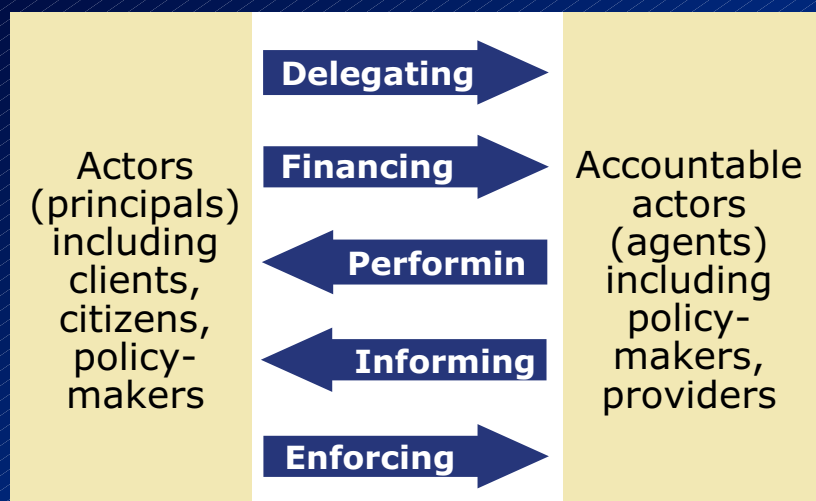


## Short and long routes of accountability



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## The relationship of accountability has five features



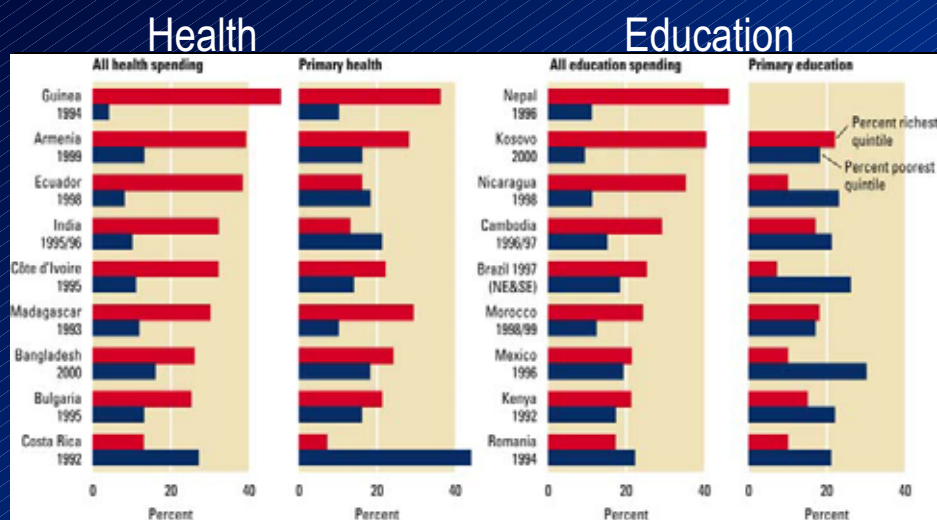
10

## How are services failing poor people?

- Public spending benefits the rich more than the poor
  - Benefit incidence analysis of public spending for diagnosis
- Money fails to reach frontline service providers
  - Captured by administrative layers or politicians
  - Public expenditure tracking surveys (PETS)
- Poor quality services
  - Quantitative Service Delivery Survey (QSDS)
    - e.g., absenteeism
- Lack of demand by households

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## Expenditure incidence



Source: Filmer 2003

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## Characteristics of public expenditure tracking surveys (PETS)

- Diagnostic or monitoring tool to understand problems in budget execution
  - delays/predictability of public funding
  - leakage / shortfalls in public funding
  - discretion in allocation of resources
- Data collected from different levels of government, including service delivery units
- Reliance on record reviews, but also head teacher/health facility manager interviews
- Variation in design depending on perceived problems, country, and sector

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## Design and implementation of PETS -

### 1 Stakeholder consultations and scope of the study

- Purpose of the study
- Who is in charge of what? How do resources flow?
- Only 1 or 2 sectors at a time
- Rapid data assessment
  - Usually needed from frontline units (schools and clinics)
  - Simple questionnaire can be useful
- Questionnaire design for PETS
  - Each level needs its own instrument
  - Recorded data to be cross-checked against the same information from another source

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## Design and implementation of PETS - 2

-Data kept by facilities for own use are typically most reliable

- Questionnaires for
  - School director / head teacher
  - local governments
  - relevant central government ministries
- Data sheets for the same
- Training, field testing, and data entry
  - Requires significant time (several weeks each activity)
  - Local participation essential
  - Test instruments at each level separately as record-keeping differs

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## Design and implementation of PETS -

3 -After translation instruments need to be re-tested in the field

- Data management
  - Important to reduce time required by data cleaning after the survey
  - Take into account in the instrument design
  - CSpro the preferred data entry program  
<http://www.census.gov/ipc/www/cspro>
- Survey implementation (1-3 months)
- Analysis, report, and dissemination

16



## Key implementation issues

- Who can do it?
  - ◆ Local or international consultant?
  - ◆ Capacity building objective?
  - ◆ Who does the analysis?
- Getting quality data
  - ◆ Field test and supervision extremely important
  - ◆ Proper data management for high quality data
- Promoting impact
  - ◆ Strategic partnerships (between ministries, using local universities or research institutes, civil society involvement)
  - ◆ Linking into existing instruments and systems

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## Sampling

- School census for sampling frame, but often census on private and/or community schools not available
- How to overcome?
  - Draw sampling units randomly from an existing set
  - enumerate all private and/or community facilities in these sampling units
  - randomly draw private and/or community facilities from the obtained enumeration list
- Stratified random sample (region, urban-rural, ownership, etc.)
- Links to other surveys can complicate sample design

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## Nonwage funds not reaching schools: Evidence from PETS (percent)

<i>Country</i>	Mean
Ghana 2000	49
Peru 2001 (utilities)	30
Tanzania 1998	57
Uganda 1995	78
Zambia 2001 (discretion/rule)	76/10

Source: Ye and Canagarajah (2002) for Ghana; Instituto Apoyo and World Bank (2002) for Peru; Price Waterhouse Coopers (1998) for Tanzania; Reinikka and Svensson 2002 for Uganda; Das et al. (2002) for Zambia.

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## Ghost workers on payroll (percent)

<i>Country</i>	Education	Health
Honduras 2000	5	8.3
PNG 2002	15	-
Uganda 1993	20	-

Sources: World Bank 2001, 2004; Reinikka 2001.

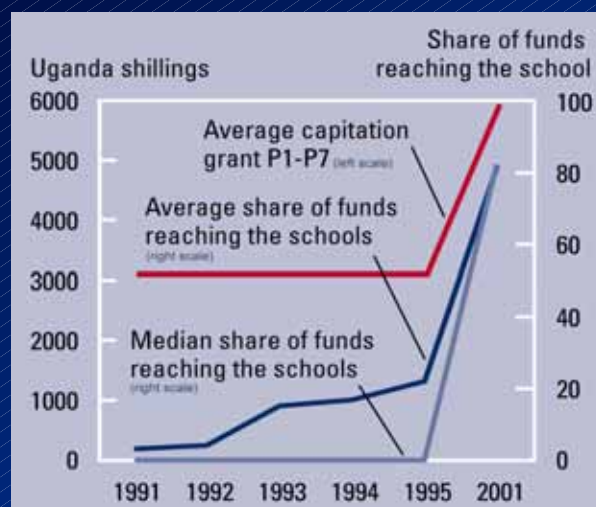
20

## The Uganda PETS 1996

- Health and education sectors
- Data collected from different levels
  - Ministries of Finance, Local Government, Education
  - 18 local governments (districts)
  - 250 schools and 100 health facilities
- Only 13 percent of intended capitation grant actually reached schools (1991-95)
  - Combining PETS with household survey data, we found that schools with wealthier parents were able to obtain more of their capitation grant entitlement
- Other findings
  - ◆ Enrollment differed from published data (60%)
  - ◆ Importance of parental contributions

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## Ugandan schools received more of what they were due after a newspaper campaign



Source: Reinikka and Svensson (2001), Reinikka and Svensson (2003a)

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## Newspaper campaign to cut capture in Uganda

- Main national newspapers (2) and their local language editions
- Monthly transfers of capitation grants to districts published in newspapers since 1996
  - Parents will know what there entitlements are
- Posters required at district HQs announcing the date and amount funds received
- Schools required to maintain public notice boards/posters displaying receipts
  - Parents will know what the actual receipts are
- Subsequently expanded to other sectors

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## Uganda: Difference-in-differences estimates for newspaper campaign

Group	Year		
	1995	2001	2001-1995 difference
<i>Panel A: Campaign experiment</i> (no. observations: 444)			
Access to newspapers	24.5 <sup>***</sup> (2.87)	83.7 <sup>***</sup> (1.94)	59.2 <sup>***</sup> (3.46)
No access to newspapers	29.6 <sup>***</sup> (5.40)	75.0 <sup>***</sup> (3.11)	45.4 <sup>***</sup> (6.22)
Access-no access difference	-5.12 (6.10)	8.68 <sup>**</sup> (3.66)	13.8 <sup>**</sup> (7.13)

\*\*\* (\*\*) significant at 1 (5) percent level, respectively  
Source: Reinikka and Svensson 2004

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## Lessons from Uganda

- Through an inexpensive policy action, mass information through the press, Uganda has managed dramatically to reduce capture of a public program aimed at increasing primary education
- Because the poor were less able than others to claim their entitlement from district officials before the campaign, but just as likely in 2001, they benefited most from it
- Public access to information is a powerful deterrent of local capture

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## Zambia

- Focus on resources and learning results and outcomes
  - Combines a public expenditure tracking survey with a accompanying household survey and testing of pupils for learning outcomes
  - Leakage
  - Incidence of actual spending
  - Household responses (substitution effect)
- Educational equity
  - Household survey enables PETS to relate school funding received to whether schools are "rich" or "poor" and to private spending on education

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## Peru

- Diagnostic PETS
- Exposed confusion in the processes of administering the budget
- Inadequacy and unresponsiveness to client needs
  - Non-salary spending fell short of schools' needs
  - Implementing units rarely responded to school's requests

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## Concluding remarks

- With proper survey techniques it is possible to collect useful quantitative data on frontline service provision to help
  - Policymaking
  - Supervision
  - Generate "client power" and strengthen "voice"
- Conventional mechanisms, such as audits, inspections, and legislative reviews not enough
- Need to complement by enhancing client power, i.e., parents' ability to monitor performance of schools and improve the clients' bargaining power
  - Information is crucial

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## Finding out more about PETS

- Survey reports, instruments, and documentation on
  - [www.publicspending.org](http://www.publicspending.org)
  - <http://www1.worldbank.org/publicsector/pe/trackingsurveys.htm>
- References:
  - Dehn, Reinikka, and Svensson. 2003. "Survey Tools for Assessing Performance in Service Delivery." In Bourguignon and Pereira da Silva, eds. *Evaluating the Poverty and Distributional Impact of Economic Policies*. Oxford University Press and the World Bank. Forthcoming
  - Lindelov and Wagstaff. 2002. "Health Facility Surveys: An Introduction." Policy Research Working Paper 2953. The World Bank

## IMPACT OF PETS

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### IMPACTS OF PETS

- Improves efficiency in public spending on inputs to education; tuition, textbooks; classrooms, teachers.
- Enhance school effectiveness.
- *Program/project designs aimed at improving input delivery systems and their use.*
- *Avails opportunity to set up/improve information on public spending curb corruption and demand accountability.*
- *Can trigger sectoral reforms and public expenditure management/tranche release.*



## Improves efficiency in public spending on inputs to education

### Teachers

- ◆ Teachers' salaries delayed and many months in arrears, ghost teachers problems.
- ◆ Teachers not in payroll.
- ◆ Absentism issues.
- ◆ Improvement in processing new entrants into the teaching force.
- ◆ Accuracy of enrolment figures upon which resources are allocated to schools.

### Textbooks

- ◆ Textbook provision, storage and use.
- ◆ Reduction in cost of textbooks.

## Classrooms

### Classrooms

- ◆ Mode and cost of provision

### Teachers

- ◆ Salary payment
- ◆ Mode of recruitment, retirement etc
- ◆ Absentism

*Improve input delivery systems and use of inputs at facility level.*

## **Improving efficiency in public spending on inputs to education (cont..)**

- Improves program/project designs.
- Avails opportunity to set up/improve information on public spending curb corruption and civil society to demand accountability.
- Can trigger sectoral reforms and public expenditure management/tranche release.
- Introduce poverty reduction strategies in provision.

## **Improves program designs**

- ◆ Textbooks provision.
- ◆ Classroom provision.
- ◆ Recruitment and payment of teachers.
- ◆ Budget support from project approach.
- ◆ Joint evaluations by donors in the sectors.
- ◆ Roles of the central ministry and local governments streamlined.

Can trigger sectoral reforms and public expenditure management/tranche release

# Multi-purpose school and health facility surveys

Ritva Reinikka

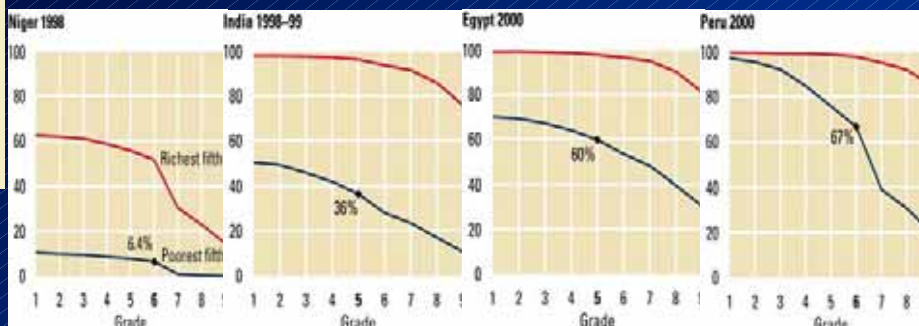
Development Research Group

World Bank

June 22 2004

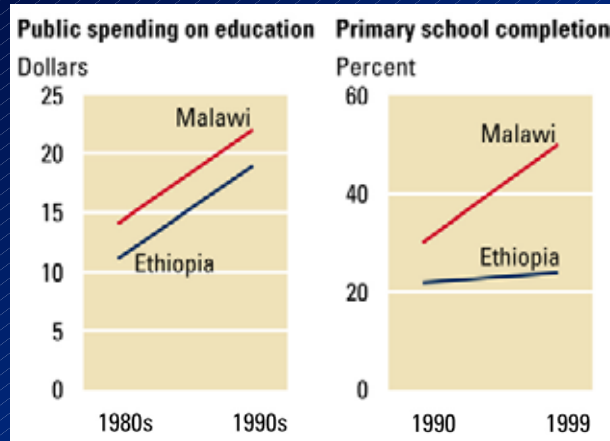
## Outcomes are worse for poor people

Percent aged 15 to 19 completing each grade or higher



Source: Analysis of Demographic and Health Survey data

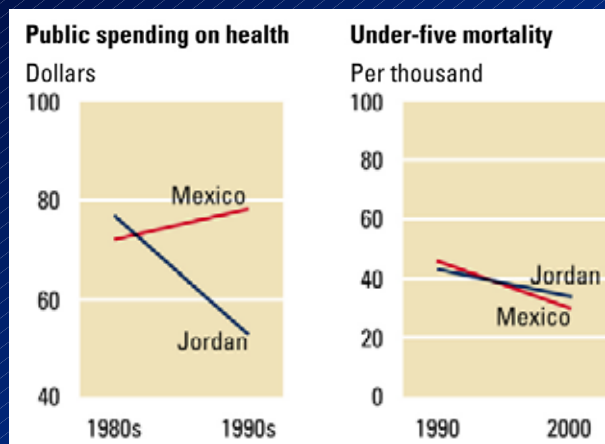
Similar changes in public spending can be associated with vastly different changes in outcomes...



Sources: Spending data from World Development Indicators database. School completion from Bruns, Mingat and Rakatomalala 2003

3

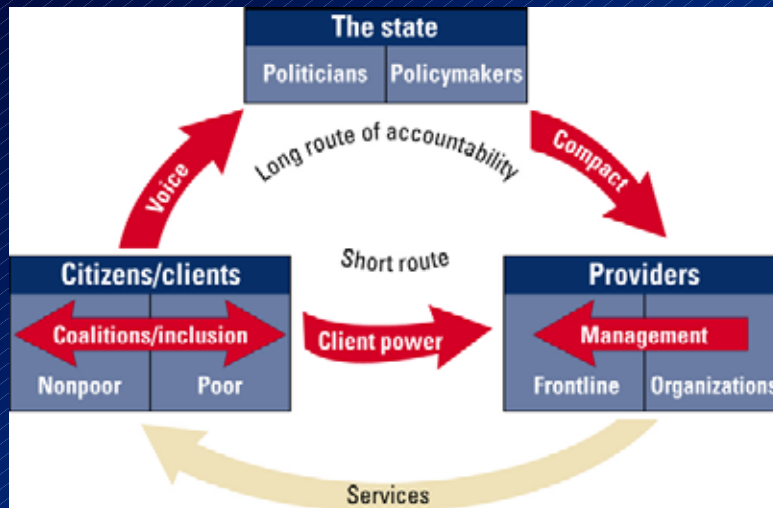
...and vastly different changes in spending can be associated with similar changes in outcomes.



Sources: Spending data for 1990s from World Development Indicators database.

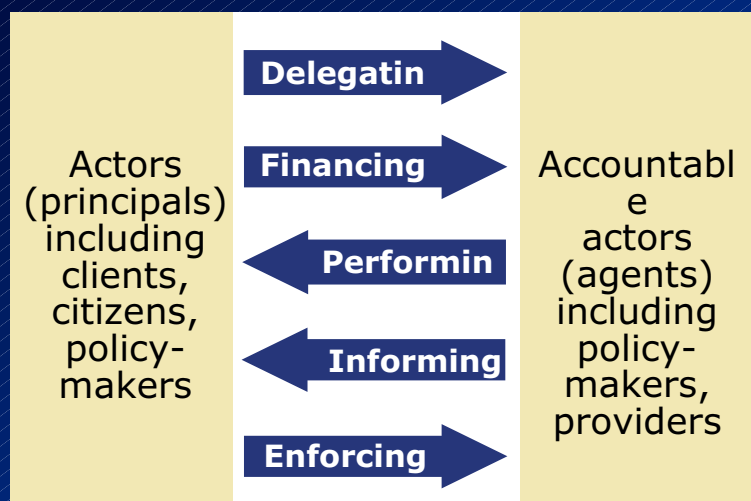
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## Short and long routes of accountability



5

## The relationship of accountability has five features



6

## Perception based surveys

- Score-cards
- Interviews with
  - Households
  - Firms
  - Key informants in communities
  - Public officials
  - Focus groups
- Easy to implement, relatively cheap
- But results depend on expectations

7

## Quantitative Service Delivery Surveys (QSDS)

- Unit of observation is frontline service provider, such as health facility or school
- Inspired by micro-level household and firm surveys
- Collect information on
  - ◆ Resources (financial and in-kind) and inputs
  - ◆ Service outputs and cost-efficiency
  - ◆ Quality of service
  - ◆ Various dimensions of performance
- Comparisons across ownership categories

8

## Design & implementation of QSDS - 1

- Stakeholder consultations and scope of the study
- Rapid data assessment
- Questionnaire design
  - Recorded data to be cross-checked against the same information from another source as incentives to misreport
  - Data kept by facilities for their own use are typically the most reliable
  - Questionnaires and data sheets for facilities (and in some cases for local governments)

9

## Design and implementation of QSDS - 2

- Field testing of questionnaires
  - Requires significant time (weeks)
  - After translation instruments need to be re-tested
- Training of enumerators
  - Requires significant time (weeks)
- Survey implementation
  - Requires significant time (1-3 months)
  - Continuous supervision of enumerators

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## Design and implementation of QSDS - 3

- Data management
  - Important to reduce time required by data cleaning after the survey
  - Needs to be taken into account in the instrument design
  - CSpro the preferred data entry program and to be found at <http://www.census.gov/ipc/www/cspro>
- Analysis of data and report writing
- Dissemination is important if the study is to have impact

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## Sampling

- Often no reliable census of service facilities, particularly the private sector
- Listing of government facilities usually available, not-for-profits sometimes, but private for-profit seldom
- How to overcome?
  - Drawn sampling units randomly
  - enumerate private facilities in these sampling units
  - randomly draw private facilities from the enumeration list
- Stratified random sample
- Links to other surveys affect sampling

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## Absenteeism studies

- Document the extent of absence among teachers and health workers in Asia, Africa and Latin America
  - "Absent" defined conservatively as "could not be located anywhere in the facility during random visit in his/her regular work hours"
- Explore the patterns and correlates of providers absence
  - How much is the problem concentrated in particular sectors, regions, countries, and individuals?
  - What are the major correlates of provider absence – school management, supervision, community involvement, hiring policies, contracting, bonuses?

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## Survey approach

- Carried out facility surveys of a nationally representative sample of schools in 8 countries
- Sampling
  - Careful random sampling of schools, stratified by region and by rural/urban status, and clustered by district
  - Countries other than India generally included 100-200 schools clustered in 10 districts
  - In India, each of 20 states was treated as a country, so Indian sample is >3,000 schools

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## Survey approach

### School survey methodology

- **School module:** Detailed interview with head teacher to gather detailed school data (infrastructure, remoteness, parental involvement, etc.) and teacher roster
- **Teacher module:** Enumerators directly observed absence/presence of each teacher, then interviewed teachers for detailed demographic and background data
- 2-3 visits to each school, to allow multiple observations of absence and to ensure that most teachers could be interviewed directly
- **Student module:** Brief interview and simple arithmetic test of 10 randomly chosen 4<sup>th</sup> graders in each school

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## Extent of absence: Global results - 1

<i>Absence rates (percent) in:</i>	<b>Primary schools</b>	Primary Health Centers
Bangladesh	<b>16</b>	35
Ecuador	<b>14</b>	--
India	<b>25</b>	40
Indonesia	<b>19</b>	40
Papua New Guinea	<b>15</b>	19
Peru	<b>11</b>	23
Uganda	<b>27</b>	37
Zambia	<b>17</b>	--

16

## Extent of teacher absence: Global results - 2

- What do these national-average absence rates tell us?
- Absence rates are substantial: from 11 to 27 percent of teachers could not be found *anywhere in the school*
  - And many of those who were present at school were not teaching

17

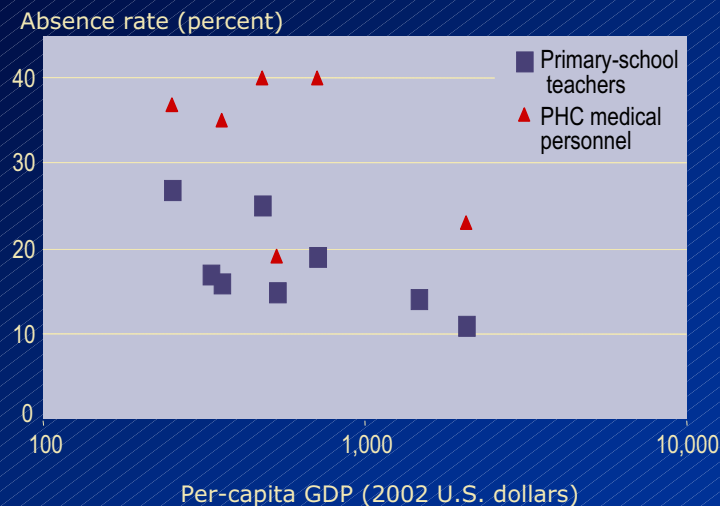
## Extent of absence: Global results - 3

- Absence rates decline as national per-capita incomes rise (graph)
  - Large and statistically significant effect: 6-7 percentage points for each US\$1,000 (or 3 percentage points when use PPP)
  - Relationship in primary education is stronger than in health
- Comparing across sectors, teacher absence rates are lower than rates for medical staff
  - PHC absence rate is 14 percentage points higher on average
  - May reflect both greater legitimate reasons for absence and greater outside income-earning opportunities

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## Extent of absence: Global results - 4

Wealthier countries have lower teacher absence rates



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## Patterns & correlates of absence - 1

- Some global patterns and correlates are emerging from country-by-country analysis, despite substantial variation
- Factors predicting **higher absence rates**:
  - Community-level factors
    - More remote communities
    - Less educated parents of students
  - Teacher-level factors
    - Teachers with more power (more education, higher rank, older)
  - Management and institutional factors
    - Poor facility infrastructure (lack of toilets)
    - Multi-grade teaching
    - Less frequent inspections

20

## Patterns & correlates of absence - 2

Factors that are not generally significant correlates in our survey countries:

- Local ties (such as provider's birthplace and tenure at the facility) are not typically associated with lower absence
- Marital status (and sometimes gender) typically does not matter, despite plausible stories about family responsibilities
- PTA/school association effect is not general (except India)
- Use of contract teachers does not appear to lead to better incentives; in fact, contract teachers are absent at much higher rates than regular teachers in 3 of 4 countries
- Private schooling is not a panacea, at least in India and Indonesia, though private competition may have a role

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## All India Teacher Absence Map (public schools)



State	Teacher absence (%)
Maharashtra	14.5
Madhya Pradesh	16.5
Gujarat	17.0
Kerala	20.3
Karnataka	20.5
Himachal Pradesh	21.2
Haryana	21.2
Tamil Nadu	21.4
Orissa	23.1
Rajasthan	23.6
West Bengal	24.8

## Finding out more about QSDS

- Survey reports, instruments, and documentation on
- [www.publicspending.org](http://www.publicspending.org)
- <http://www1.worldbank.org/publicsector/pe/trackingsurveys.htm>
- Some references:
  - Dehn, Reinikka, and Svensson. 2003. "Survey Tools for Assessing Performance in Service Delivery." In Bourguignon and Pereira da Silva, eds. *Evaluating the Poverty and Distributional Impact of Economic Policies*. Oxford University Press and the World Bank. Forthcoming
  - Lindelov and Wagstaff. 2002. "Health Facility Surveys: An Introduction." Policy Research Working Paper 2953. The World Bank

## The organization of Education: Decision-Making under Decentralization

*PETS in Education  
Phnom Penh, Cambodia  
June 21-30, 2004*

*Don Winkler*

## *Decision-Making in Basic Education*

- ▶ Decisions determine resource allocation.
- ▶ Decision-making may be concentrated in the national education ministry or not
- ▶ Appearances are often deceiving
  - De jure vs. de facto
  - Regulations and mandates
  - Focus on key decisions



## *Education Decisions by Function*

---

- ▶ Key decision-making areas in education include:
  - Personnel
  - Curriculum
  - Textbooks
  - Facilities
  - Supplies
  - Finance

## *Education Decisions by Level of Government*

---

- ▶ Decisions may be made at various levels, either within the national ministry bureaucracy or by other governments.
  - National
  - Regional/Provincial
  - Local/District
  - Municipal
  - School

## *The Distribution of Decision-Making*

Function	National	Regional	Local	School
Personnel				
Curriculum				
Textbooks				
Facilities				
Supplies				
Finance				

## *Decisions about Teachers*

- ▶ Teacher pay scale/level
- ▶ Certification
- ▶ Recruitment and selection
- ▶ Transfers
- ▶ Pre-service training provision
- ▶ In-service training provision
- ▶ Performance evaluation

## *Decisions About Teacher Recruitment & Selection*

Decision	Central Office	Supervisor	Headmaster	Parents
Teacher Speciality				
Short list				
Interview				
Offer of Employment				

## *How Does Decentralization Affect Education Decisions*

- ▶ Decentralization moves decision closer to the client or beneficiary.
  - Regional [province, state, department]
  - Municipal/District
  - Schools
  - Client
- ▶ The process of decentralization often creates a lack of clarity around the assignment of responsibilities.
- ▶ Decisions are often shared by more than one level of government.

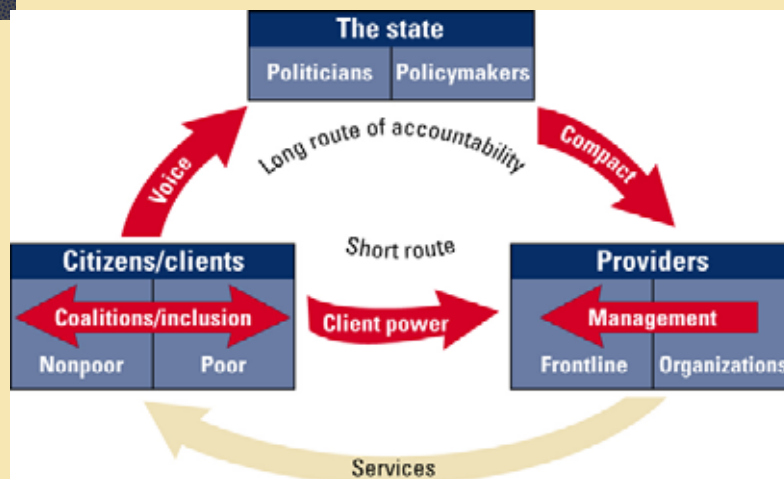
## *Definition*

- ▶ There are two basic [and very different] types of education decentralization:
  - \* To lower levels of government/bureaucracy
    - Devolution [Constitutional, Legal]
    - Deconcentration [Ministry Decree]
  - \* To the school itself
    - Delegation [Ministry Decree]
- ▶ They are not mutually exclusive.

## *Decentralization for What?*

- ▶ Democratization [Colombia, Brazil]
- ▶ Regional/Ethnic [Spain]
- ▶ Efficiency/Accountability [Chile]
- ▶ Transfer Costs [Argentina]
- ▶ Politics [Pakistan]
- ▶ Bureaucratic vacuum [Armenia]
- ▶ History [Bulgaria]
- ▶ Failure of the State [Mali, El Salvador]
- ▶ Quality [Minas Gerais]

## *Decentralization May Shorten the Long Route of Accountability*



## *Decentralization and Accountability*

- ▶ Decentralization to local governments or to schools may:
  - \* Increase client voice by shortening the distance between client and policymaker and by creating new participatory mechanisms [school councils] that strengthen the client – school nexus.
  - \* Improve sector management by shortening the distance between policymaker and school and permit resource allocation decisions informed by local conditions

## *What does international experience tell us?*

- ▶ What does international experience tell us about how to decentralize the delivery and financing of public education?
- ▶ Two principal questions:
  - \* Is the form of decentralization important?
  - \* What is the role of education ministries in a decentralized context?

## *Lessons of Experience:*

- ▶ How should decentralization be designed?
  - \* Clear assignment of responsibilities
  - \* Avoid too many levels of government
  - \* Align management responsibilities with financial resources
- ▶ What should be the role of the central government?
  - \* Ensure quality
  - \* Promote quality and efficiency
  - \* Facilitate and guide
  - \* Evaluate, assess, provide information

### *Lessons of Experience:*

---

- ▶ What should be the responsibility of the school and director?
    - \* Create school development plans with teachers and the community
    - \* Recruit and evaluate personnel
    - \* Manage non-personnel budget
    - \* Create a parent-friendly environment
  
  - ▶ What should be the responsibilities of parents?
    - \* School governance
    - \* Participation in the school
    - \* Demand for good performance
- 

### *How Should Decentralized Education be Financed?*

---

- ▶ Align financing responsibilities.
  - ▶ Transparent allocation formulas.
  - ▶ Predictable revenue flows.
-

## *How Should school decentralization be implemented?*

- ▶ Two basic modalities – Big Bang, gradual
- ▶ Ministry of Education role.
  - \* Evaluate, learn, disseminate
  - \* Remove obstacles
  - \* Provide leadership
  - \* Redefine its mission and organize accordingly

## *What Have we Learned?*

- ▶ Schools and parents can be empowered in any system.
- ▶ Improved accountability requires unambiguous definitions of responsibilities.
- ▶ The central government remains large, but different.
- ▶ Simply changing structures have limited benefits.



## *What Have we Learned?*

- ▶ Decentralization has the potential to raise quality **if it leads to changes in the school:**
  - \* Leadership
  - \* Teacher commitment
  - \* Focus on learning
  - \* Real accountability for results

## *To Understand Resource Flows Requires an Understanding of Who Makes Resource Decisions*

- ▶ The Exercise: Mapping Education Decisions
- ▶ Table 4:
  - Teachers
  - School Director
  - Textbooks
  - Infrastructure
  - School Supplies
- ▶ Table 5:
  - Voice: Community participation



Phnom Penh – June 2004

# Section 1

## Objectives and issues

Jacques Hallak and Muriel Poisson

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1



### 1. Prepare for the study through consultations

- Agree on purpose and objectives
- Identify:
  - ▶ *key questions and tentative answers*
  - ▶ *resource flow and rules for allocation*
  - ▶ *roles of public and private schools*
- Assess
  - ▶ *data availability*
  - ▶ *local capacity to carry out the survey*

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2



## 2. Agree on purpose and objectives

Why and how to consult

Examples: Uganda, Peru, Zambia

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## 3. Agree on purpose and objectives

- Consult stakeholders on objectives
  - ▶ *ministries: education, finance, planning, etc.*
  - ▶ *donors*
  - ▶ *civil society: PTA, teachers' unions, etc.*
- Why?
  - ▶ *to get useful inputs*
  - ▶ *to understand what they hope to find out*
  - ▶ *to motivate them and develop ownership*
- Agree beforehand on provisional objectives

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4



## Purpose and objectives: Uganda

- Problem: increase in primary school funding has not boosted enrolment rate
- First objective: measure leakage of funds on their way to schools, analyze causes
- Second objective: analyze equity of fund distribution

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## Purpose and objectives: Peru

- Problem: severe administrative disorder in educational financing
- First objective: measure leakage of funds on their way to schools
- Second objective: uncover corruption in teacher hiring and promotion

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## Purpose and objectives: Zambia

- Problem: decrease in enrolments, especially in poor communities
- First objective: measure extent to which earmarked resources actually reach schools
- Second objective: measure how much this funding improves equity in education
- Third objective: examine how interventions could reverse enrolment decrease

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## 4. Identify key issues

Research questions and tentative answers

Examples: Uganda, Peru, Zambia

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## 5. Identify research questions and tentative answers

- To collect data you should have in mind:
  - ▶ *one or more research questions*
  - ▶ *a tentative answer (hypothesis) to each question*
- Good tentative answer = successful study
- To develop a good tentative answer, use:
  - ▶ *evidence, anecdotes, experiences*
  - ▶ *sound concept*
  - ▶ *country's broad education goals*

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## Question and tentative answer: Uganda

- Question: why has increased primary school funding not boosted enrolment rate?
- Tentative answer: Funds provided by the central government are not reaching the schools

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## Question and tentative answers: Peru

- Question: why is educational financing in disorder?
- Tentative answers (not explicitly stated)
  - ▶ *major leakage in teachers' salaries process*
  - ▶ *implementation units (IUs) capture a share of non-wage funds due to their discretionary power, e.g. they often omit to pay utilities*
- Explicit tentative answers could have helped the study to yield concrete results

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11



## Question and tentative answers: Zambia

- Question: Why do school enrolments decrease, especially in poor communities, despite increased government funding?
- Tentative answers:
  - ▶ *Discretionary funds (major part of govt allocations) do not reach all schools*
  - ▶ *Rule-based funds reach all schools*
  - ▶ *Due to bargaining power, schools with wealthy parents get more discretionary funds per pupil*

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12

# Sources and Uses of Education Finance

**Donald Winkler**  
**WBI and RTI**  
**June 2004**

## Sources of Education Finance

- Public Sector [ % GDP]
  - By level of government
  - By ministry or agency
  
- Private Sector [ % GDP]
  - By households
  - By firms or NGOs



## Public Sector Finance of Basic Education

- Governments: national, regional, local
- Ministries: education, finance, social welfare, health
- Total & Unit Cost of Basic Education

Ministry	Nation	Region	Local
Educa-tion			
Finance			
Social Welfare			
Health			
Etc.			

## Expenditure Categories by National Ministry

- Education Ministry: teachers, textbooks, supplies, supervision, school grants
- Finance Ministry: intergovernmental transfers, school grants
- Social Welfare: school lunch, pensions, income contingent scholarships
- Health: health services to teachers and students
- Labor, Religion, Defense: specialized schools



## Private Sector Finance of Basic Education

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- Households
  - Tuition & fees
  - Textbooks, supplies, transportation
  - In-kind contributions [labor, food, etc.]
- Firms, NGOs
  - In-kind contributions—internet, supplies
  - Cash donations
  - Employee time



## Finance by Expenditure Category

---

- Sources of finance for teacher compensation (salaries & benefits):
  - National ministries—salaries, benefits
  - Local agencies—supplemental salaries, salaries to contract teachers, housing
  - Households—school fees, tutor payments
  - Firms & NGOs—employee time



## Flow of Funds for Each Expenditure Category

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- School Lunch, for example,
  - National Ministry of Social Welfare sends cash transfers based on enrollment to
  - Provincial Ministry of Education which procures foodstuffs and
  - Contracts private firms to transport to eligible schools, and
  - PTA uses food to prepare meals



## Opportunities for Leakage in School Lunch Finance

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- Provinces overstate enrollment of eligible students
- Provincial education officials “overpay” for foodstuffs and/or its transport
- Private firms “lose” foodstuffs en route or fail to deliver food before it spoils
- Non-eligible schools “convince” provincial officials they are eligible
- Food “disappears” from school storage rooms, or it spoils before used



## The Task: Ruritania

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- What are the sources—by agency and level of government—of primary education finance?
- Show the detailed sources of finance and flow of funds and goods for textbooks.
- What are the opportunities for leakage—wastage and corruption?



## Data quality and availability -- with respect to sampling

Mioko Saito (IIEP)  
Phnom Penh, June 2004

References:

- Ross and Mählck (1990)
- Ross (1999)

1



## Problems of data quality and availability can be introduced in...

- ◆ Instrument preparation
- ◆ Field data collection
- ◆ Data transcription

Also in sample design preparation

2



## Basic requirements in instrument preparation

- ◆ Each question has a link with a certain policy concern.
- ◆ Questions do not give freedom of interpretation.
- ◆ Multiple-choices are mutually exclusive.
- ◆ Monitor the printing process to avoid missing pages, etc.
- ◆ Conduct a trial testing.

3



## Basic requirements in field data collection

- ◆ Allocation of correct identification codes.
- ◆ Data collectors to intercept missing/invalid/contradictory/unreadable information.
- ◆ Preparation of field manuals.
- ◆ Training of data collectors for 'standardized operation' in collection.

4



## Basic requirements in data transcription

- ◆ Provision of adequate working environment for data entry team.
- ◆ Establishment of 'coding rules' and document them for data entry team.
- ◆ Training on the use of appropriate technology for data entry and cleaning.
- ◆ Archiving of the data.

5



## Basic requirements on sample design

- ◆ Target population definition
- ◆ Sampling frame preparation
- ◆ Specification of domains and strata
- ◆ Establishment of required sampling precision
- ◆ Establishment of required sample size
- ◆ Application of mechanical selection procedure with known probabilities
- ◆ Calculation of sampling weights and sampling errors

6



## What is often implemented?

- ◆ Unclear definition of target population
  - Researchers unable (do not bother) to provide size and nature of population
  - Generalization made to “desired population”
- ◆ Sampling frame is out of date / incomplete / with duplicated entries
  - Due to rapid population growth and/or uncontrollable population movement

7



## What is often implemented? (Cont'd)

- ◆ Participants are “nominated” rather than sampled
  - Judgement sampling
  - Convenience sampling
  - Quota sampling

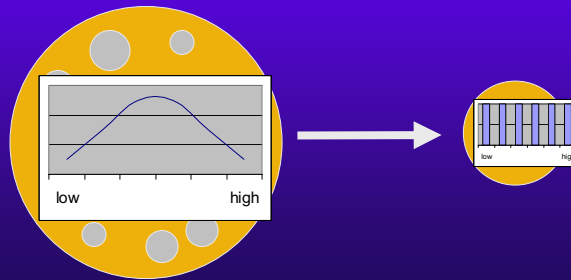
8





## Judgment Sampling

- ◆ Researchers pick “typical sample”.
- ◆ Depends on subject interpretation of “typical”

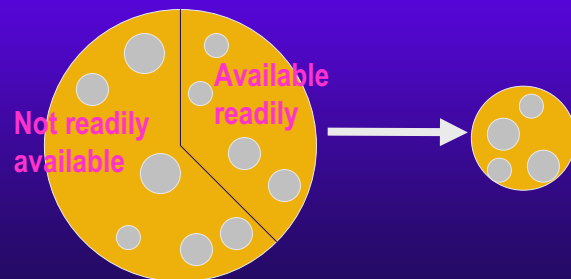


9



## Convenience Sampling

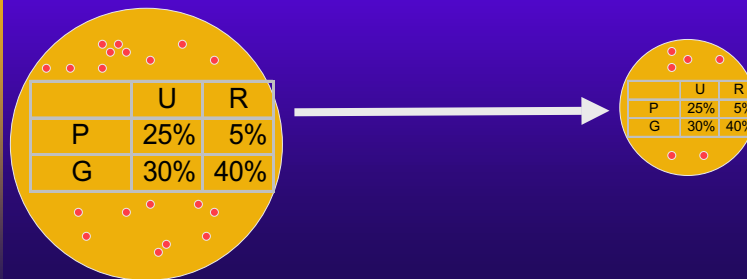
- ◆ Elements are selected on the basis of accessibility or convenience to the researcher
- ◆ Likely to introduce a substantial degree of bias



10

## Quota Sampling

- ◆ Tight restrictions on elements per stratum
- ◆ No control over procedures used to select elements within these strata
- ◆ Not possible to stratify with all the existing characteristics



11

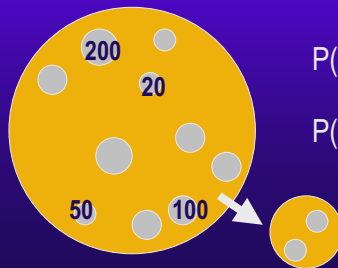
## What is often implemented? (Cont'd)

- ◆ Use of sample size based on fixed percentage of the population
- ◆ Use of sample size with inadequate adjustment for non-response
- ◆ Confusion between 'total sample size' and 'effective sample size' in complex design

12

## What is often implemented? (Cont'd)

- ◆ Use of random sample in cluster sampling introducing bias
  - From 10 districts, select a random sample of 2 districts, and then a random sample of 20 schools in each district



$$P(L) = 2/10 \times 20/200 = 1/50$$

$$P(S) = 2/10 \times 20/20 = 1/5$$

13

## What is often implemented? (Cont'd)

- ◆ On-site alterations to the sample design by field staff
- ◆ Wrong formula for sampling errors (on certain software)
- ◆ Confusion of units of sampling and units of analysis

14



## Target Population Definition

Mioko Saito (UNESCO-IIEP)  
Phnom Penh , June 2004

Source: Kish (1965)

1



## Desired and defined population

- ◆ Desired = Standard 6 pupils in schools in Malawi in the year 2002
- ◆ Defined = All full-time pupils at the Standard 6 level in 2002 at the tenth month of the school year who are attending registered government or non-government schools that have at least 20 Standard 6 pupils in the six educational administration divisions of Malawi

→ Moving from general to more specific description

2



## Target Population

- ◆ Units
- ◆ Context/Location
- ◆ Extent
- ◆ Time

3



## Units

### Example

- ◆ Desired = Standard 6 pupils in schools in Malawi in the year 2002
- ◆ Defined = All full-time pupils at the Standard 6 level in 2002 at the tenth month of the school year who are attending registered government or non-government schools that have at least 20 Standard 6 pupils in the six educational administration divisions of Malawi

4



## Context/Location

### Example

- ◆ Desired = Standard 6 pupils in schools in Malawi in the year 2002
- ◆ Defined = All full-time pupils at the Standard 6 level in 2002 at the tenth month of the school year who are attending registered government or non-government schools that have at least 20 Standard 6 pupils in the six educational administration divisions of Malawi

5



## Extent

### Example

- ◆ Desired = Standard 6 pupils in schools in Malawi in the year 2002
- ◆ Defined = All full-time pupils at the Standard 6 level in 2002 at the tenth month of the school year who are attending registered government or non-government schools that have at least 20 Standard 6 pupils in the six educational administration divisions of Malawi

6



## Time

### Example

- ◆ Desired = Standard 6 pupils in schools in Malawi in the year 2002
- ◆ Defined = All full-time pupils at the Standard 6 level in 2002 at the tenth month of the school year who are attending registered government or non-government schools that have at least 20 Standard 6 pupils in the six educational administration divisions of Malawi

7



## Definitions

- ◆ Desired target population -- The population for which results are ideally required
- ◆ Defined target population – the population which is actually studied and whose elements have a known and non-zero chance of being selected into the sample
- ◆ Excluded population – the population comprised of the elements excluded from the desired target population in order to form the defined target population

8



## Excluded Population

- ◆ Excluded Population = Desired Population – Defined Population
- ◆ Reasons for exclusion
  - Non-coverage
  - Lack of resources
  - Ageing population description

9



## Definitions

- ◆ Desired target population -- The population for which results are ideally required
- ◆ Defined target population – the population which is actually studied and whose elements have a known and non-zero chance of being selected into the sample
- ◆ Excluded population – the population comprised of the elements excluded from the desired target population in order to form the defined target population

10





## Excluded Population

- ◆ Excluded Population = Desired Population – Defined Population
- ◆ Reasons for exclusion
  - Accidental non-coverage
  - Intentional non-coverage (lack of resources, conflict, hazards, etc.)
  - Ageing population description

11



## Desired and defined population

- ◆ Desired = Primary schools in Uganda in the year 2004
- ◆ Defined = All registered government or non-government primary schools in Uganda in 2004 during the fifth month of the school year that are NOT in the war-conflict areas having at least 50 pupils in the 45 educational administration divisions of Uganda

→ Moving from general to more specific description

12



## Probability Sampling

Mioko Saito (IIEP)  
Phnom Penh, June 2004

Reference: Ross, 2004



## Probability Sampling

- ◆ Each element in the population has a known non-zero probability of being selected
- ◆ It is applied in:
  - Simple Random Sampling
  - Stratified Sampling
  - Cluster Sampling

Dist.	Sch.	Reg.	Geog.	#Visits
A	1	1	Coast	10
A	2	1	Coast	20
A	3	1	Coast	30
A	4	1	Coast	40
B	5	1	Inland	30
B	6	1	Inland	40
B	7	1	Inland	50
B	8	1	Inland	60
C	9	1	Coast	50
C	10	1	Coast	60
C	11	1	Coast	70
C	12	1	Coast	80
D	13	2	Inland	70
D	14	2	Inland	80
D	15	2	Inland	90
D	16	2	Inland	100
E	17	2	Inland	90
E	18	2	Inland	100
E	19	2	Inland	110
E	20	2	Inland	120
F	21	2	Coast	110
F	22	2	Coast	120
F	23	2	Coast	130
F	24	2	Coast	140

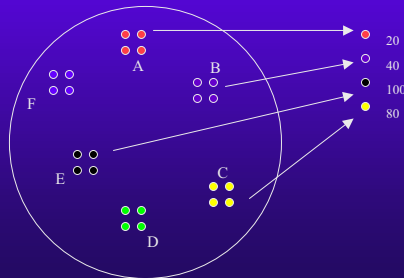
Population of 24 schools in six districts



Take a sample of four schools

## Simple Random Sampling (SRS)

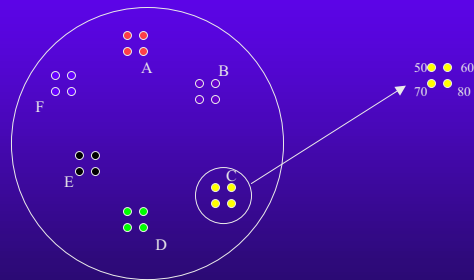
- ◆ Select a simple random sample of 4 schools.



$$p = \frac{4}{24} = \frac{1}{6}$$

## Single Stage Intact Cluster Sampling

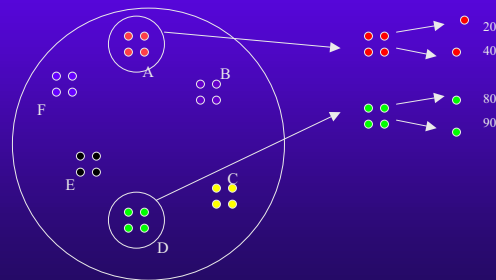
- ◆ Select a simple random sample of one district and then accept all schools in the selected district.



$$p = \frac{1}{6} \times \frac{4}{4} = \frac{1}{6}$$

## Two-Stage Cluster Sampling

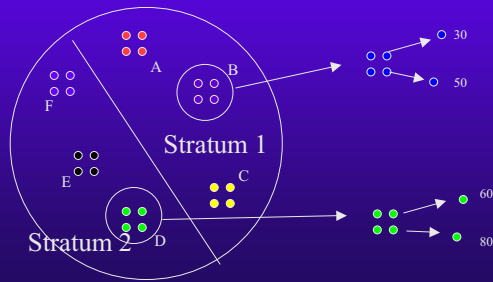
- ◆ Select a simple random sample of two districts followed by a simple random sample of two schools within each selected district.



$$p = \frac{2}{6} \times \frac{2}{4} = \frac{1}{6}$$

## Stratified (Region) Two-Stage Cluster Sampling

- ◆ First stratify the population by region (1 and 2).
- ◆ Select a simple random sample of one district in the first stratum followed by a simple random sample of two schools within the selected district.
- ◆ Repeat this for the second stratum.

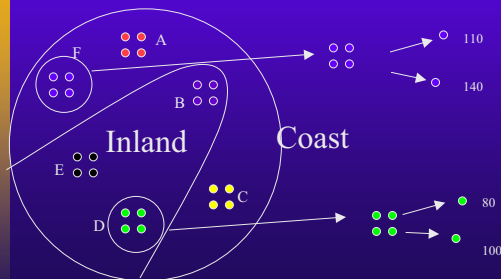


$$p = \frac{1}{3} \times \frac{2}{4} = \frac{1}{6}$$

Same for both strata

## Stratified (Geography) Two-Stage Cluster Sampling

- ◆ First stratify the population by geography (Coast/Inland).
- ◆ Select a simple random sample of one district in the first stratum followed by a simple random sample of two schools within the selected district.
- ◆ Repeat this for the second stratum.



$$p = \frac{1}{3} \times \frac{2}{4} = \frac{1}{6}$$

Same for both strata





## Messages on cost

- ◆ Cluster sampling can be a cost saving solution

Less Expensive

More Expensive



SS1CS

2SCS

SRS

S(R)2SCS

S(G)2SCS



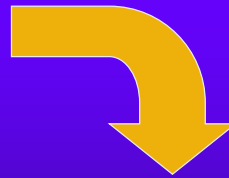
## Bias and probability

- ◆ Difference between the population value and the expected value
- ◆ Mean of sample estimates of this value calculated for an infinite number of independent samples
- ◆ If this difference is zero then the sample design is said to provide 'unbiased' estimates.



Dist.	Sch.	Reg.	Geog.
A	1	1	Coast
A	2	1	Coast
A	3	1	Coast
A	4	1	Coast
B	5	1	Inland
B	6	1	Inland
B	7	1	Inland
B	8	1	Inland
C	9	1	Coast
C	10	1	Coast
C	11	1	Coast
C	12	1	Coast
D	13	2	Inland
D	14	2	Inland
D	15	2	Inland
D	16	2	Inland
E	17	2	Inland
E	18	2	Inland
E	19	2	Inland
E	20	2	Inland
F	21	2	Coast
F	22	2	Coast
F	23	2	Coast
F	24	2	Coast

With same MOS



District	MOS
A	4
B	4
C	4
D	4
E	4
F	4



With same MOS

District	MOS
A	4
B	4
C	4
D	4
E	4
F	4

Take a random sample of two districts and then take a random sample of two schools at each district...

Probability for school #1 in District A to be selected:

$$p(1) = \frac{2}{6} \times \frac{2}{4} = \frac{1}{6}$$

Probability for school #24 in District F to be selected:

$$p(24) = \frac{2}{6} \times \frac{2}{4} = \frac{1}{6}$$

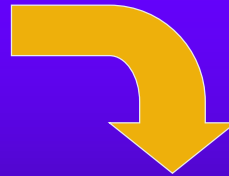
**Unbiased**





Dist.	Sch.	Reg.	Geog.
A	1	1	Coast
A	2	1	Coast
B	3	1	Inland
B	4	1	Inland
C	5	1	Coast
C	6	1	Coast
D	7	2	Inland
D	8	2	Inland
E	9	2	Inland
E	10	2	Inland
E	11	2	Inland
E	12	2	Inland
E	13	2	Inland
E	14	2	Inland
F	15	2	Coast
F	16	2	Coast
F	17	2	Coast
F	18	2	Coast
F	19	2	Coast
F	20	2	Coast
F	21	2	Coast
F	22	2	Coast
F	23	2	Coast
F	24	2	Coast

With different MOS



District	MOS
A	2
B	2
C	2
D	2
E	6
F	10



With different MOS

District	MOS
A	2
B	2
C	2
D	2
E	6
F	10

Take a random sample of two districts and then take a random sample of two schools at each district...

Probability for school #1 in District A to be selected:

$$p(1) = \frac{2}{6} \times \frac{2}{2} = \frac{1}{3}$$

Probability for school #24 in District F to be selected:

$$p(24) = \frac{2}{6} \times \frac{2}{10} = \frac{1}{15}$$

**Biased**



## With different MOS

District	MOS
A	2
B	2
C	2
D	2
E	6
F	10

Take a sample of two districts with the probability proportional to size of district, and then take a random sample of two schools at each district...

Probability for school #1 in District A to be selected:

$$p(1) = \frac{2}{24} \times 2 \times \frac{2}{2} = \frac{1}{6}$$

Probability for school #24 in District F to be selected:

$$p(24) = \frac{10}{24} \times 2 \times \frac{2}{10} = \frac{1}{6}$$

Unbiased



## Use a random starter and a fixed interval for the 'winning tickets'

District	MOS	Lottery Tickets
A	2	1 to 2
B	2	3 to 4
C	2	5 to 6
D	2	7 to 8
E	6	9 to 14
F	10	15 to 24

Interval =  $24 / 2 = 12$  (fixed)

Random starter = a number between 1 and 12

If the random starter is 7, which two districts are selected?



## Select 2 districts in each stratum

Stratum	District	MOS	Tickets	
			First	Last
1	A	45	1	45
	B	60	46	105
	C	95	106	200
Subtotal	3	200		
2	D	45	1	45
	E	110	46	155
	F	120	156	275
	G	125	276	400
Subtotal	4	400		
Total	7	600		

Stratum 1:

Random starter=25

Stratum 2:

Random starter=146

**Which districts are selected?**

# Sample Size Requirement

Mioko Saito (UNESCO-IIEP)  
Phnom Penh, June 2004

- Sources
- Ross (1999)
  - Sylla, Saito, & Ross (1999)

## How many districts and schools? How many schools and students?

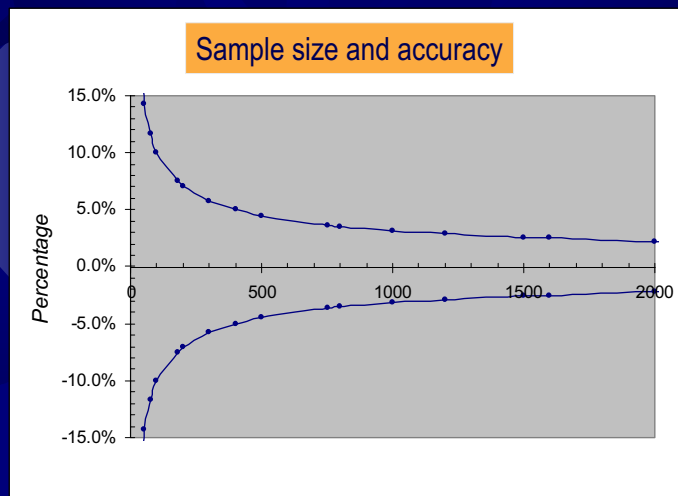
- How much money are you willing to spend? →
  - What is the impact of the research? →
  - How is educational policy being made? →
  - How homogeneous are your population? →
  - What type of survey are you conducting? →
- Confidence limit and accuracy
  - Stratification
  - Intra-class correlation coefficient
  - Design effect
  - Cluster size

How big is your population? ~~✗~~

## Confidence Limit

- ☀ Central Limit Theorem “The SRS distribution of means tends toward a normal distribution regardless of the shape of the population.”
  - “68% confident that the population mean lies within the range specified by sample mean  $\pm 1$  SE of the sample mean”
  - “95% confident that the population mean lies within the range specified by sample mean  $\pm 2$  SE of the sample mean” **IEA Standard**
  - “99% confident that the population mean lies within the range specified by sample mean  $\pm 3$  SE of the sample mean”

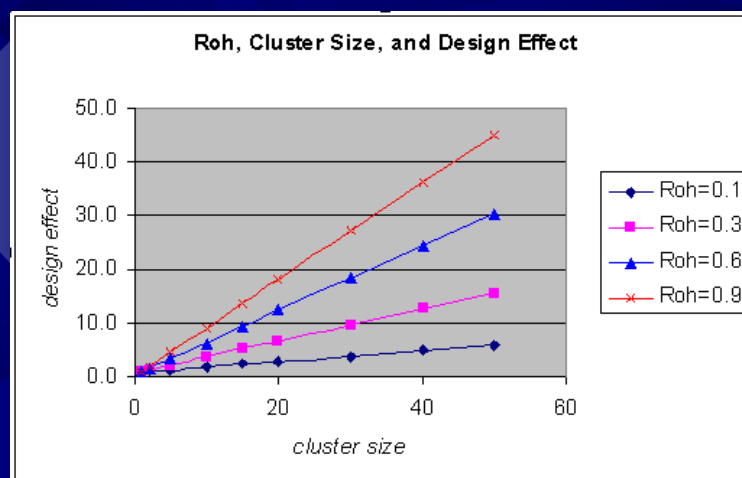
## Relationship between sample size and sampling accuracy



## Accuracy

- NOT related to the proportion of sample size to the population
- Related to the error limit
- Determined by sample size in SRS.
- Determined by effective sample size (ESS) in complex sampling.
- $ESS = \text{sample size} \div \text{design effect (DEFF)}$

## DEFF as Function of Roh and Cluster Size



## Intra-class correlation coefficient and design effect

- ☀ Co-efficient of intra-class correlation
- ☀ Varies between 0 and 1
- ☀ Indicates how much of the overall variation can be attributed to variation among different clusters
- ☀ Design effect is a function of intra-class correlation coefficient

## Cluster Size

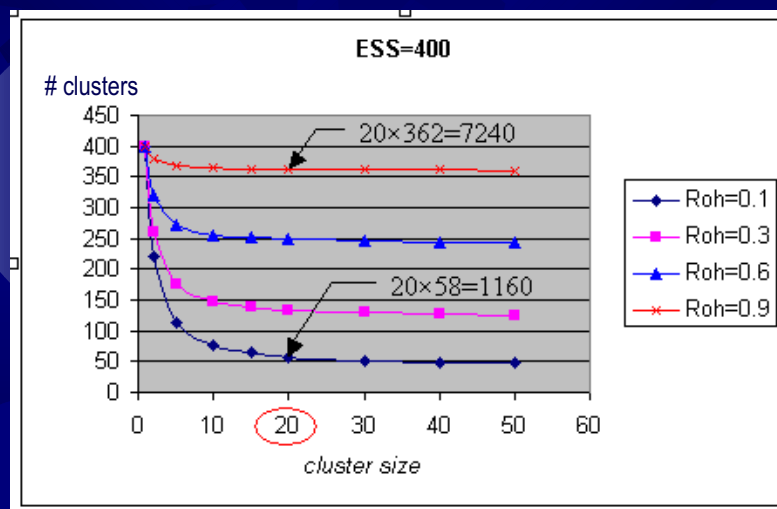
- ☀ Indicates the number of elements in a cluster
- ☀ Data collection administration
  - Classroom size
  - Easy to manage by one data collector
  - Pupils to behave “comfortably”, etc.

## Required Sample Size

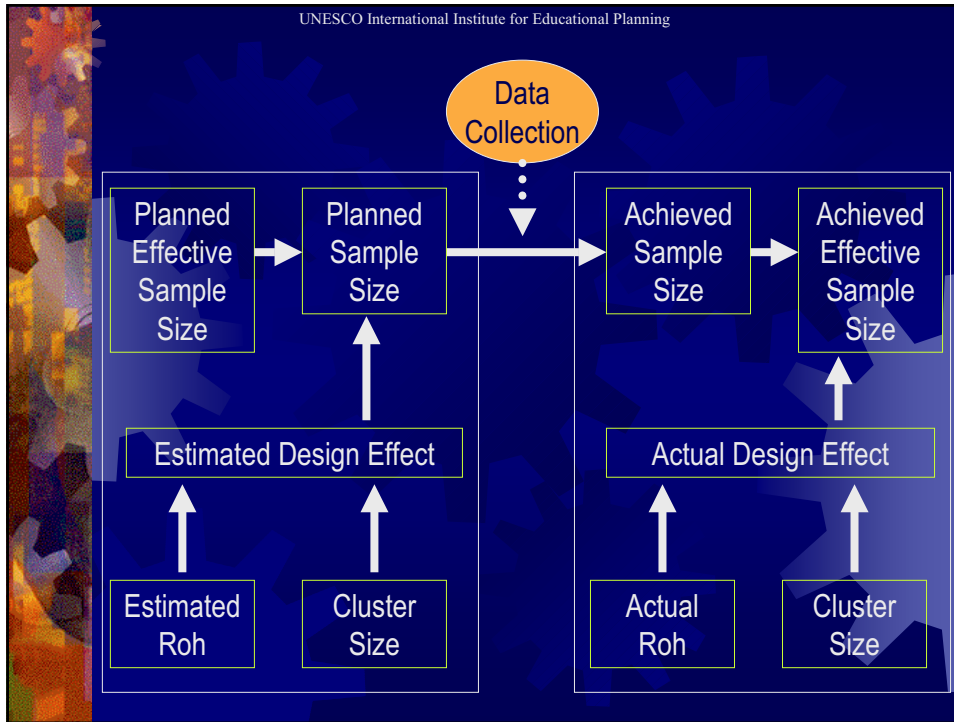
- Function of ESS, Roh, and Cluster Size

$$n = ESS \times (1 + (b - 1)roh)$$

## Different sample size for Different Roh (at ESS=400)







## Planned, Achieved, and Effective sample size (SACMEQ II)

School System	Planned Sample		Achieved Sample		% Achieved		Design Effect		ESS	
	Schools	Pupils	Schools	Pupils	Schools	Pupils	Reading	Math	Reading	Math
BOT	170	3400	170	3322	100%	98%	5,1	4,9	649	682
KEN	185	3700	185	3299	100%	89%	10,3	9,3	320	355
LES	180	3600	177	3155	98%	88%	8,1	9,1	391	346
MAL	140	2800	140	2333	100%	83%	5,3	3,7	442	621
MAU	159	3180	159	2945	100%	93%	6	5,9	488	487
MOZ	179	3580	176	3177	98%	89%	4	4,2	800	740
NAM	275	5500	275	5048	100%	92%	6,6	6,2	767	810
SEY	24	1571	24	1484	100%	94%	0,9	0,9	1603	1602
SOU	185	3700	169	3163	91%	85%	16,9	13,5	187	232
SWA	170	3400	168	3139	99%	92%	9,4	8,1	333	389
TAN	185	3700	181	2854	98%	77%	8,7	6,7	325	423
UGA	164	3280	163	2642	99%	81%	11,9	14,9	222	176
ZAM	175	3500	173	2611	99%	75%	7,2	6	361	430
ZAN	145	2900	145	2514	100%	87%	1,1	1	2234	2470
SACMEQ	2336	47811	2305	41686	99%	87%				



## Probability, Raising Factor, and Sampling Weights

Mioko Saito (UNESCO-IIEP)

Phnom Penh, June 2004

Source: Ross (1999)



## Sampling weights

- ◆ Sample design determines the way to calculate weights
- ◆ The inverse of the probability of selection of the sampling unit

## Hypothetical example

Region ID	School ID	Enrolment
1	101	300
1	102	400
1	103	500
2	201	20
2	202	60
2	203	80
2	204	100

Out of the population of 7 schools, stratify by region, then select one school in each region.

If Schools 101 and 201 are selected, what are their probabilities of selection, raising factors, and weights?

## Option 1: Simple Random Sampling (SRS) of schools

Region ID	School ID	Enrolment
1	101	300
1	102	400
1	103	500
2	201	20
2	202	60
2	203	80
2	204	100

- ◆ For School 101:
  - Probability =  $1/3$
  - Raising Factor = 3
  - Weight =  $3 \times 2/7 = 0.86$
- ◆ For School 201:
  - Probability =  $1/4$
  - Raising Factor = 4
  - Weight =  $4 \times 2/7 = 1.14$

## Option 2: Probability Proportional to Size (PPS) Sampling of schools (linked to 1 pupil unit at each school)

Region ID	School ID	Enrolment
1	101	300
1	102	400
1	103	500
2	201	20
2	202	60
2	203	80
2	204	100

### ◆ For School 101:

- Probability =  $\frac{300}{1200} \times \frac{1}{300} = 0.1118$
- Raising Factor = 1200
- Weight =  $1200 \times \frac{2}{1460} = 1.64$

### ◆ For School 201:

- Probability =  $\frac{20}{260} \times \frac{1}{260} = 0.004$
- Raising Factor = 260
- Weight =  $260 \times \frac{2}{1460} = 0.36$

## Implications on data analysis

School ID	Enrolment	Unit\$	option 1	option 2
101	300	500	0.86	1.64
201	20	200	1.14	0.36

### ◆ What is the average Unit \$?

No weight

$$\frac{(500 + 200)}{2} = 350$$

Option 1

$$\frac{(500 \times 0.86 + 200 \times 1.14)}{2} = 329$$

Option 2

$$\frac{(500 \times 1.64 + 200 \times 0.36)}{2} = 446$$



## Standard errors of sampling

- ◆ Different calculation methods are required for different sample design
- ◆ Caution for interpretation

Example

Type	Boarding		Cafeteria	
	%	SE	%	SE
Gov.	49.4	2.64	25.0	2.35
Priv.	56.4	2.67	28.4	2.49
Ruritania	52.8	1.88	26.7	1.71

# Questionnaire Design for Data Management

Ivo Njoso  
Development Research  
Group  
Public Services

Phnom Penh, June 21-30 2004

# Questionnaire Design for Data Management

- Objective is to help you design questionnaires that will facilitate the capture and computerization of your PETS data

## Questionnaire Design for Data Management

- When done correctly you have:
  - › Neatly filled questionnaires
  - › Consistency in response codes
  - › Easy-to-read for data entry agents
  - › Consistency in the overall analysis

## Questionnaire Design for Data Magt *Background*

- Data processing is almost always the “bottleneck” in all surveys
- Typical PETS fieldwork 2-3 months
- Primary data entry 3-4 months
- Data cleaning 6 months more, yet “unclean” data

## Questionnaire Design for Data Management

- Elements of clean data
  - Consistent and logical
    - Frequency of unit of analysis and all other variables consistent
    - Expenditure of continuous variables realistic
    - Consistency in coding
    - All missing values justified and documented

## Questionnaire Design for Data Management

- Challenges of designing PETS questionnaires
  - Pets not “standardized”
- Most others are
  - Household surveys/Labour force/Demographic/Income-Expenditure
- PETS is a diagnostic tool
  - Investigative in nature
  - Flow of financial/non-financial resources through disparate government functional systems
  - No two systems (government) alike



## Questionnaire Design for Data Management

- Consequences

- › Questionnaire logical design different for each country
- › Data structure unique

## Questionnaire Design for Data Management

- Good questionnaire layout facilitates the data entry design and subsequent data entry and cleaning

1. Involve a Data Management Specialist from the beginning
2. Delineate the questionnaire into sections
3. Pre-code all variables directly on the questionnaires
4. Enumerate each variable clearly
5. Create entry boxes for response fields
6. Integrate logical skips and test it during pilot

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning
- Delineate the questionnaire into sections
  - Easier to collect the information
  - Easier to manage the files

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning
  - Delineate the questionnaire into sections
  - Pre-code all variable values
    - Avoid at all cost non-numeric values
    - Use “Other”, “Don’t know”, “Don’t remember”, “Refuse to answer”
- (A good pilot test should point out these problem variables and help you decide)

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning
- Delineate the questionnaire into sections
- Pre-code all variable values
- Enumerate each variable clearly
  - Facilitates the naming convention for data entry designer

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning
- Delineate the questionnaire into sections
- Pre-code all variable values
- Enumerate each variable clearly
- Create entry boxes for response fields
  - Expenditure variables
  - Other quantitative variables

## Questionnaire Design for Data Management

- Involve a Data Management Specialist from the beginning
- Delineate the questionnaire into sections
- Pre-code all variable values
- Enumerate each variable clearly
- Create entry boxes for response fields
- Integrate logical skips and test it during pilot

## Questionnaire Design for Data Management

No	Questions	CODES	Skip to	
1	Head teacher last year?	1 Yes 2 No	>>q3	<input type="text"/>
2	Position last year	1 Gov. official 2 Private 3 Other	>>q7 >>q7 >>q7	<input type="text"/>
3	How many teachers are in this school?	Number		<input type="text"/>
4	How many males	Number		<input type="text"/>
5	How many are females	Number		<input type="text"/>
6	What is your salary	Enter "-1" for refuse to answer	>>q10	<input type="text"/>
7	Number of tests performed last year	1 Aids 2 Malaria 3 Cancer		<input type="text"/> <input type="text"/>

## Questionnaire Design for Data Management

No	Questions	CODES	Skip to	
1	Did you perform X last year	1 Yes 2 No	>>q3	<input type="text"/>
2	Number of tests performed	Number		<input type="text"/>
3	Did you spend on product X last year?	1 Yes 2 No	>>q7	<input type="text"/>
4	How much	amount		<input type="text"/>
5	Do all your teachers have cars	1 Yes 2 No 3 Do not know		<input type="text"/>
6	Do they drive to school	1 Yes 2 No 3 Depends 4 Do not know		<input type="text"/>

## Conclusion

- Involve a Data Management Specialist early
- Response clear in all circumstances
- Responses anticipated thus precoded
- Communicate with Data Management Specialist

## Conclusion

- Any Questions???????



## Conclusion

- Thanks!

# **TYPES AND NUMBER OF QUESTIONNAIRES**

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**Development Research Group**  
**Public Services**

**Phnom Penh, June 21-30 2004**

## **QUESTIONNAIRES**

**What determines the number of questionnaires  
for PETS?**

**Good understanding of the following combination:**

- **Administrative structures.**
- **Sources of funds**
- **Flow of each type resource through such structures.**
- **The institutional arrangement at each level for handling educational from higher level and to another level.**
- **Can vary from local government to another in decentralized systems.**

**Please understand the banking system with respect to flows of funds.**



## **Types and number of Questionnaires**

- **Data sheets for extraction of data at specific levels.**
- **Questionnaire with portions covering different respondents in the institutions or separated questionnaire for each respondent to avoid confusing enumerators.**
- **Qualitative questionnaires. Include a sheet at the end of the questionnaire where qualitative information is recorded. Answers to some parts of key questionnaire can be clarified using this part.**

## **Levels to apply Questionnaires/Data sheet.**

- **Central government (MOES, MOF, etc).**
- **Province/Region.**
- **District.**
- **Sub district.**
- **School/ Health facility.**
- **Student/patients.**

**Clear understanding of the sources and types of education/health funding, administrative structures and the flow of funds through such structures are key to determining the number of questionnaires.**

## **!!!School Questionnaire!!!**

- **A set of questions intended to collect data to address most issues identified during the PETS preparatory stage(issues and objectives) at school level.**
- **Most important questionnaire but expensive to execute.**
- **Implemented at service delivery point; a place where various aspects of service can be observed and where all the inputs converge and can affect the delivery and quality of service to consumers; students.**

## **Government Questionnaires:**

- **Refers to Central Government(MOE/MOF), Provisional/Regional and (DEO)**
- **Establish financial or in kind transactions that occur at each levels with respect to flow of resources.**
- **What additional resources are added to lower levels from other sources as resources flow through levels and schols/health centres**
- **Who contributes to such additional resources(in kind and cash).**
- **Which resources are you interested to track in your PETS.**
- **How are different resources accounted for at school level and other levels.**

# School Financing in Indonesia: Transparency, Efficiency and Equity

## A Case Study:

RTI International – Managing Basic Education (MBE), Indonesia  
USAID funded Project

By: Prima Setiawan and Nicole Barnes

Cambodiana Hotel, Phnom Penh  
June 21-30, 2004

### 1. Introduction

- a. Indonesia and Education
- b. Aims, Why Education, Issues Addressed, and Targets

### 2. Education Finance in Indonesia

- a. Overview of Indonesia's Intergovernmental Finance System
- b. Key Central level grants in Indonesia: particularly for education
- c. Challenges for fiscal decentralization in Indonesia's education sector
- d. Main Sources of fund (Gov.) for School
- e. LG – Education Financing Allocation
- f. Diversified Sources of Funding for Schools

### 3. Planning and Budgeting

- a. Prior to Decentralization
- b. Current condition

### 4. Formula Funding

- a. Reasoning behind the ideas
- b. Goals
- c. The formulas should show several criteria
- d. Variables and Weighting
- e. The Formula
- f. Samples: variable and fixed expenditures
- g. Minimum Education Cost per Children per Year

### 5. Constraints and Challenges

### 6. What have we learned?

## 1. Introduction

### a. Indonesia & Education, Sources: MONE 2001



	Primary	Junio Secondary	Senior Secondary
Schools	148.964	20.721	12.409
Classrooms	888.638	177.594	115.745
Students	25.697.810	7.584.707	4.872.451
Teachers	1.128.475	463.864	354.648

### **Aims**

- To improve the management and quality of education

### **Why education?**

- Government policy to have 9 years Basic Education
- It consumes 40% - 50% of District Budgets
- It employs up to 70% of local government employees
- It is essential to social, political and economic development

## Issues Addressed

1. Governance: Parliaments, Education Board, School Committee

### 2. Finance:

- Planning, *Medium-term planning supported by reliable school mapping*
- Budgeting, *Integrated Financing and Expenditures*
- Formula Funding, *developing equitable financing systems to support SBM, school operations and maintenance*
- Costing, *for minimum student cost per year*

*All processes, should be run in participatory way, using transparent, accountable, and efficient mechanisms*

3. Management of Teachers, Facilities, Resources

4. School and community Based Management and Teaching

## Targets

- Planning and budgeting process of education finance:
  - ✓ Supported by reliable and up to date data,
  - ✓ Participatory, transparent and accountable,
  - ✓ Displayed and open to all
- LGs implement:
  - ✓ Formula funding based on an agreed criteria, transfer the fund directly to school – to support SBM, operations and maintenance
  - ✓ Costing for Minimum Education Cost per Student per Year
- At school level:
  - ✓ Education financing from all sources: National (MONE, MORA, MOF, others), LG, parents, foundations, donors, others *are known by stakeholders*
  - ✓ Education expenditures: teachers (salary), capital (new and rehabilitation), and operational *are known by stakeholders*

## **2. Education Finance in Indonesia**

### **a. Overview of Indonesia's intergovernmental finance system**

#### Central funds transferred locally

DAU grant (general purpose, equalization)

DAK Grant (special purpose, capital expenditures)

#### Funds shared between levels of government

Property tax

Natural Resources taxes

Income tax

#### Local sources of revenue

Local taxes/user charges (local and provincial)

### **b. Key central level grants in Indonesia: particularly for education**

#### **DAU**

- Most important grant: DAU funds 75% of all local government budgets
- Purpose of DAU: to fund service delivery (including civil servant salaries) & to 'equalize' local governments
- DAU is allocated by formula(s):
  - 60% of allocation = percentage of central gov't revenues; guaranteed funding level from previous year
  - 40% of allocation = represents variations in population, area, poverty, expenditure needs and revenue potential
- Formulas subject to change each year.

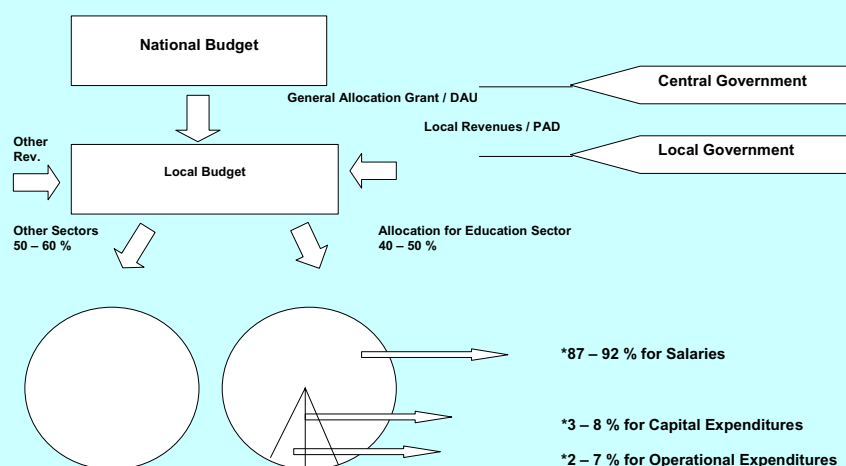
#### **DAK**

- Purpose of DAK: 'special purposes', meaning capital expenditure for infrastructure. In exceptions it can be used to operations/maintenance.
- There can be multiple DAK grants (examples: education, health, etc.)
- Local government apply for DAK funding

### c. Challenges for fiscal decentralization in Indonesia's education sector

- ▶ Roles of sectoral ministries unclear after decentralization (examples: MONE, MORA). In addition, control over finances rests firmly with MOF
- ▶ Sectoral funding is not clearly dedicated to the sector (note DAU example), and transferred through a variety of channels
- ▶ Education finance system is not transparent (in fact, highly opaque)
- ▶ Education finance is open to corruption at many levels, and in fact, notorious for being corrupt in Indonesia

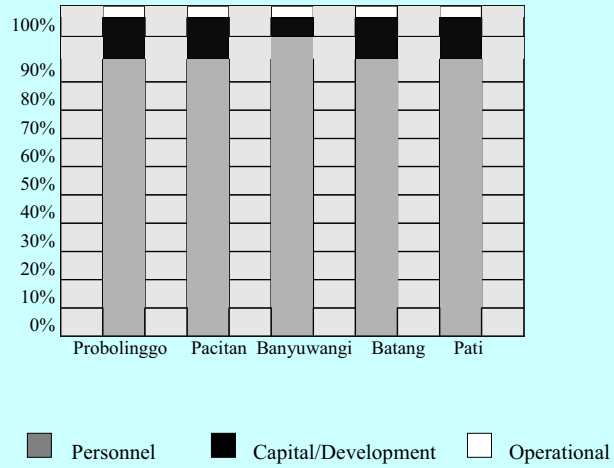
### d. Main Sources of Fund (Gov.), and its allocation



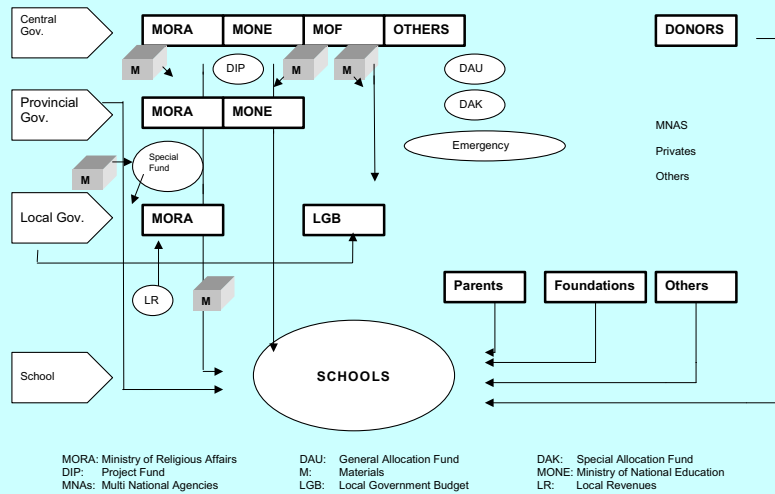
Sources: MBE Surveys in 5 Local Governments, MBE 1<sup>st</sup> Batch

### e. LG – Education Funding Allocation

FY 2002



### f. Diversified Sources of Funding for Schools





### 3. Planning and Budgeting

#### ➤ Prior to Decentralization

- Prior to decentralization, Local governments and schools had very limited authority and responsibilities
- Planning at Education (LG Level), not based on real needs
- School Development Plan and School Budget was developed and kept by Head Teacher.
- Non-integrated School Budget, resources and expenditures were spread in different books and difficult to be tracked
- Some schools don't even have an budget

#### b. Current Condition

- Responsibilities and resources was delegated to Local Government and schools
- **Changes in (most) MBE Partner LGs and Schools:**
  - Reliable and up-to date data bases were made and analyzed, and used for basic planning in prioritizing the real needs for budgeting purposes
  - Integrated Medium School Development Plan and Annual School Budget was developed by Head Teachers, teachers, and school committees. Budget is prepared based on the analysis of priority-based requirements.
  - The School Development Plan and School Budget are displayed on school notice boards for everyone to see.
  - Integrated Annual School Budgets, all resources and expenditures, planned and actual have been booked in an integrated form.

## **4. Formula Funding**

### **➤ Reasoning behind the ideas**

- School with more students should in general receive more funding and everyone should know what each school receive.
- When funds (from LG or others) are given to school and local communities to manage they are used much more efficiently. Fund to repair one classroom are often sufficiency to repair two, owing to the efficient management of fund at local level, and extra voluntary contributions from local community.
- When the education financing is allocated and distributed to the school, the Head Teacher, teachers, and school committees can plan and manage the fund according to their aims (SBM). Such as: support for teaching and learning, buying of learning materials, as well as maintenance of the school building.

### **c. The Formula should fulfil several criteria:**

- Participatory process, involving education stakeholders in the process of decision making
- Transparent in process and open to all, easy to be understand by public;
- Efficient, schools can plan and manage as per their needs
- Equitable, each school gets its allocation based on their relative needs
- Simple, LGs are able to run and manage it by themselves (for its sustainability)

#### d. Variables and Weighting

**Number of Students:** illustrate the funding needs for education in general

**Number of classrooms:** illustrate the funding needs for maintenance

**Other variables:** Number of Teachers, Types of Institutions, Number of Poor Students, Remote Schools, etc.

*Variables should be backed up by reliable up to date data, and be acceptable by the stakeholders*

**Weighting,** for each variable illustrates its proportion to the needs of each school

**Weight:** is customized to needs and based on plans; goals and local condition.

#### e. The FORMULA

$$F_i = TF \times \left\{ \left( W_1 \times \left( \frac{V_{1i}}{\sum V_{1n}} \right) \right) + \left( W_2 \times \left( \frac{V_{2i}}{\sum V_{2n}} \right) \right) \right\}$$

$F_i$  : Funding Allocation for certain School (i)

TF : Total Funding Allocation from LG

$W_1$  : Weight for variable 1 (e.g. no of students)

$V_{1i}$  : Variable (1) for certain school (i)/number of students in school (i)

$\sum V_{1n}$  : Total Variables 1 of all schools

$W_2$  : Weight for variable 2 (e.g. no of classrooms)

$V_{2i}$  : Variable (2) for certain school (i)/number of classrooms in school (i)

$\sum V_{2n}$  : Total Variable 2 of all schools

$$W_1 + W_2 = 1 \text{ (100\%)}$$

## f. Sample

### 1. Variable expenditure

20	SDN	2	Nambangan Kidul	Rp	3,660,000,00
21	SDN	3	Nambangan Kidul	Rp	3,465,000,00
22	SDN	4	Nambangan Kidul	Rp	5,115,000,00
23	SDN	5	Nambangan Kidul	Rp	6,820,000,00
24	SDN	1	Winongo	Rp	4,950,000,00
25	SDN	2	Winongo	Rp	2,900,000,00
26	SDN	3	Winongo	Rp	4,485,000,00
27	SDN		Ngegong	Rp	5,115,000,00
28	SDN	1	Pathan	Rp	4,455,000,00
29	SDN	2	Pathan	Rp	2,915,000,00
30	SDN	1	Pangongangan	Rp	2,280,000,00
31	SDN	2	Pangongangan	Rp	5,200,000,00
32	SDN	3	Pangongangan	Rp	5,800,000,00
33	SDN		Sogalen	Rp	6,600,000,00
34	SDN	1	Kartoharjo	Rp	8,445,000,00
35	SDN	2	Kartoharjo	Rp	3,445,000,00
36	SDN	3	Kartoharjo	Rp	0,000,00
37	SDN	4	Kartoharjo	Rp	7,975,000,00
38	SDN	1	Kleglen	Rp	8,795,000,00
39	SDN	2	Kleglen	Rp	3,350,000,00
40	SDN	3	Kleglen	Rp	5,530,000,00
41	SDN	4	Kleglen	Rp	7,015,000,00
42	SDN	5	Kleglen	Rp	2,145,000,00
43	SDN	6	Kleglen	Rp	2,750,000,00
44	SDN	1	Oro-oro Ombo	Rp	7,070,000,00
45	SDN	2	Oro-oro Ombo	Rp	6,325,000,00
46	SDN	3	Oro-oro Ombo	Rp	4,650,000,00
47	SDN	1	Rejomulyo	Rp	2,340,000,00
48	SDN	2	Rejomulyo	Rp	3,440,000,00
49	SDN	1	Kanigoro	Rp	5,005,000,00
50	SDN	2	Kanigoro	Rp	6,410,000,00
51	SDN	3	Kanigoro	Rp	2,000,000,00
52	SDN		Sukosari	Rp	3,330,000,00
53	SDN	1	Piliangbarjo	Rp	3,215,000,00
54	SDN	2	Piliangbarjo	Rp	3,135,000,00
55	SDN	1	Tawangrejo	Rp	3,135,000,00
56	SDN	2	Tawangrejo	Rp	3,080,000,00
57	SDN		Kelun	Rp	8,500,000,00

## Formula Funding for Schools in MBE's Partner Districts/Cities (Kindergarten – Senior High School)

	Districts/ Cities	Actual		Planned		Public		Private		Variables/Weighting (%)							
		2004		2005		2004		2005		Number of Student		Number of Classroom		Type of Institutions		Type of Teachers	
		2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005		
1st Batch	Banyuwangi		⇒	⇒	⇒					50	30		10		10		
	Probolingo		⇒	⇒	⇒					60	30						
	Pacitan	✓	✓	✓	✓					100	70	30					
	Pati	✓	✓	✓	✓					70	60	30	30		10		
	Batang		⇒	⇒	⇒					60	30				10		
2nd Batch	Blitar				?												
	Batu	✓	✓	✓	⇒					100	50	30	10		10		
	Madun	✓	✓	✓						100	70	30					
	Kebumen				?												
	Banyumas				?												

Remarks:

1st Batch : started on June 2003

2nd Batch : Started on May 2004

✓ : Actual, has been implemented in FY 2004

⇒ : Planned for FY 2005

Type of institutions and Teachers, are designed separately

### **g. Minimum Education Cost/Student/Year (Excluding Salaries)**

**How much budget should be allocated by Local Government in providing Minimum education Cost per Student per Year?**

**Findings:**

- Local Government's Budget for Elementary School: Rp 14,000 – Rp 18,500 (USD 1,5- USD 2) /student/year
- Most fund to run the schools were contributed by parents, Rp 120,000 (USD 13.3) or more/student/year
- Draft costing by MBE is Rp 124,000 (USD 14)/student/year

### **5. Challenges**

To achieve a more transparent, efficient and equitable policy and mechanism, so it will create:

- Better processes in plan and budgeting;
- More efficiency in education financing;
- Better education quality and management;
- Better human resource capacity;
- More best practices/innovation;
- Wider dissemination.

## 6. What have we learned from MBE?

- **Transparency**, makes local community more willing to add more sources to support the school's needs (money, materials, workforce)
- **Efficiency**, school and school committees can plan and manage the fund according to their own plans
- **Equity**, schools received an equitable source of fund (excluding salary) based on certain variables and weightings

- **Improved Education Management:**

- Assess commitment of local government to change before starting (*no commitment – no assistance!*)
- Build models which local government can maintain and develop (*simple and understandable*)
- Involve multiple stakeholders in activities including: Local Planning Agency, Dept. of Education, Ministry of Religious Affairs, Education Council, and Finance Section (where appropriate, Reps. of Head Masters) SO THOSE STAKEHOLDERS ARE WELL INFORMED, ON BOARD AND TAKE OWNERSHIP !!!
- Involve democratic institutions (Local Parliament, Education Board, and School Committee at all stages)

## **ORGANIZING AND MANAGING FIELD WORK**

### **Define the scope of the fieldwork**

- Schools, districts, Provinces/Regions.
- Estimate the time to be spent at each level.
  - School
  - District
  - Province
  - Central level
- Effect of field sampling of those to be interviewed.

**Establish cost of work; staff, transport, communication, data analysis, etc.**

## **SELECTION OF STAFF**

### **Set out possible criteria for staff selection:**

- Language.
- Previous experience.
- Communication skills.
- Willingness to work for long hours.
- Health.
- ✓ Select more fieldwork than you may need to avoid problem of labour turnover.
- ✓ Explain what is expected of each staff and terms of service.
- ✓ Supervisory staff.

**Data Management staff included (Ivo)**

## TRAINING

**Duration of training and what is to be covered.**

**Training Materials.**

- Questionnaires (opportunity to revise).
- Manuals.

**Methodology.**

- ✓ Participatory prompting individuals to give hypothetical answers.
- ✓ Group work.
- ✓ Lecture.

## PILOT

- Work with each individual/pair
- Assess the capability of each staff and discuss their individual weaknesses.
- Go through pilot work done and discuss with each individual/pair
- Test all aspects of the survey; duration, staff, sampling, supervisory work, communication network,

Organize one day review training and determine modification of questionnaire etc required.



### **IMPLEMENTING FIELDWORK**

- Determine working groups; pairing weak staff and good staff.
- Set out criteria for working; minimum coverage; procedures to be followed; contracts; payment of fees and field allowances; questionnaires required, supervision etc.

### **IMPLEMENTING FIELDWORK (cont..)**

- May increase pace as learning curve grows.
- Check completed questionnaires.
- Motivate field staff.
- Ensure communication with field teams and supervisors.

**Time to rest and complete work done.**

### **IMPLEMENTATION OF SURVEYS**

- **Letters of introduction from MOE/MOH.**
- **Questionnaires and Manual for each level.**
- **Province/Region.**
- **District level Questionnaire(One or pair).**
- **School/Health centre.**
- **End of day meeting for the teams.**
- **Completion of questionnaires from draft to final copies.**
- **Communication with team at end of day/morning.**

### **HANDLING COMPLETED QUESTIONNAIRES**

- **Weekly/Biweekly submission of completed questionnaires.**
- **Review each submitted questionnaire for errors and inconsistencies.**
- **Pass the questionnaires to Data Manager for data entry**
- **Handle questionnaires returned by Data Manager and resubmit.**

## Data Entry and Cleaning

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Development Research  
Group  
Public Services

Phnom Penh, June 21-30 2004

## Data Entry and Cleaning

- Objective is to help you prepare effective data entry programs that minimize the post cleaning period

## Data Entry and Cleaning *Background*

- Data processing is almost always the “bottleneck” in all surveys
- Typical PETS fieldwork 2-3 months
- Primary data entry 3-4 months
- Data cleaning 6 months more, yet “unclean” data

## Data Entry and Cleaning *Background*

- Elements of clean data
  - › Consistent and logical
    - Frequency of unit of analysis and all other variables consistent
    - Expenditure of continuous variables realistic
    - Consistency in coding
    - All missing values justified and documented

## Data Entry and Cleaning

- Challenges of designing PETS questionnaires
  - › Pets not “standardized”
- Most others are
  - › Household surveys/Labour force/Demographic/Income-Expenditure
- PETS is a diagnostic tool
  - › Investigative in nature
  - › Flow of financial/non-financial resources through disparate government functional systems
  - › No two systems (government) alike

## Data Entry and Cleaning

- Consequences
  - › Questionnaire logical design different for each country
  - › Data structure unique

## Data Entry and Cleaning

- Good questionnaire layout facilitates the data entry design and subsequent data entry and cleaning
  1. Involve a Data Management Specialist from the beginning
  2. Delineate the questionnaire into sections
  3. Pre-code all variables directly on the questionnaires
  4. Enumerate each variable clearly
  5. Create entry boxes for response fields
  6. Integrate logical skips and test it during pilot

## Data Entry and Cleaning *Quality Controls*

- Design an effective data entry program
  1. Data entry screens must match questionnaire
  2. Concurrent controls (Real time controls)
  3. Integrate range checks
  4. Use controls of reference tables whenever available
  5. Simple consistency checks (Intra-record)
  6. Sophisticated consistency checks (inter record)

## Data Entry and Cleaning

- Data entry screens must match questionnaire
  - Helps data entry agents follow the flow

## Data Entry and Cleaning

No	Questions	CODES	Skip to	<input type="text"/>
1	Did you receive any private funds last year	1 Yes 2 No	>>q3	<input type="text"/>
2	How much			<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
3	Date of birth			<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
4	Year started teaching in this school			<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
5	Year started teaching			
6	What is your salary	Enter "-1" for refuse to answer	>>q10	
7	Relationship with district	1 Excellent 2 Good 3 Fair 4 Bad		<input type="text"/>

## Data Entry and Cleaning

- **Concurrent controls (Real time controls)**

- Checks are done at data entry time
- This test is applied after entry of S1Q1

Field end S1Q1

If S1Q1=2 then skip to S1Q3

Endif

Field end S1Q3

If S1Q1=1 and S1Q3<=0 then reject

*(if s1q1=1 then amount must exist)*

endif

## Data Entry and Cleaning

- **Integrate range checks**

- Limits all out of range values
- Most out of range values come from data entry miskeys and carelessness
- Soft check
- Warns data entry operators but can override
- Hard check
- Cannot override



## Data Entry and Cleaning

- Use controls or reference tables whenever available
  - Sample codes
    - 1, 24, 45, 60, 90, 154, 766, 980
  - Other identification variables

## Data Entry and Cleaning

- Simple consistency checks (Intra-record)
  - Q1: When did you start teaching in this school=2000
  - Q2: When did you start teaching=2002Inconsistent  
Consistency check:  
if  $S4Q1 > S4Q2$  then reject  
Message (S4Q1 must be  $\geq S4Q2$ )

## Conclusion

- Data entry screens must match questionnaire
- Concurrent controls (Real time controls)
- Integrate range checks
- Use controls or reference tables whenever available
- Simple consistency checks

## Conclusion

- Any Questions???????



## Conclusion

- Thanks!

- [INJOSA@WORLDBANK.ORG](mailto:INJOSA@WORLDBANK.ORG)
- CSPRO internet site  
[Census.gov/ipc/www/cspro](http://Census.gov/ipc/www/cspro)

## ANALYSIS OF QSDS/PETS

**Primary analysis should focus on original objectives:**

**Uganda case:**

**Measure leakage of funds (nonwage) on their way to schools and analyze the causes.**

- Use simple average percentage and standard deviations.

**Analyze equity in fund distribution.**

- Understanding of systems of resource management at each levels and their weakness; simplify fund/input transfers, information campaign, set formula for funds and timeline for receiving resources (This is the success arising from PETS).

## IN-DEPTH ANALYSIS

Relate to other analysis such as **benefit Incidence Analysis** based on household data on consumption and cost of providing.

**Who is benefiting from public spending on education?**

- Uganda; in primary education the share of total benefit accruing to poorest quintile and richest quintile was the same.
- PETS showed different share of total benefit from education spending.

## ANALYSIS (cont.)

### Relate to other variables (econometric models):

Urban/Rural schools or other schools characteristics;

**Uganda case;** Information access and other endowments by a school (school size, qualified teachers).

**Uganda;** poor communities received nothing or very little; schools in wealthier communities received some, while local officials benefited most.

### Where PETS Analysis should lead us?

- Leakages and understanding public spending on education.
- Delivery systems of resources and relation to leakages.
- Ability to change policies and procedures to reduce leakages and improve school effectiveness to realize better social outcomes.

MOFE/MOE

Province/Region

District

School



*Phnom Penh – June 2004*

## Section 4

# Analysis & follow-up

Jacques Hallak and Muriel Poisson

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1



### Outline of the presentation

1. Contacts with government
  2. Analysis of leakage
  3. Analysis of causes
- ▶ Examples: Uganda, Peru, Zambia

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2



## 1. Contacts with Government

- Renew contacts as soon as analysis begins
  - ▶ *to align analysis with govt concerns*
  - ▶ *to involve govt personnel*
- This will:
  - ▶ *help to build govt ownership of the study*
  - ▶ *increase chances that recommendations following the analysis will suit govt's goals*

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## 2. Analysis

- Done by study team or by survey consultant
- Two complementary tasks
  - ▶ *analysis of leakage: locating and measuring*
  - ▶ *analysis of causes to propose remedies*
- Other analyses according to objectives (equity in the Zambia survey)

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### 3. Locating and measuring leakages

- Comparing resources disbursed at various levels: central, region, district, schools
- Calculating average differences between levels
- Determining how these differences vary over time and space
- Can they be explained by cheating?

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### 4. Analysis of causes

- Analysis of variations between schools, between districts, etc.
- ~~Why~~ is leakage or teacher attendance higher in some schools than in others?
- Look for correlation between factor observed and other variables
- Answer research questions and test hypotheses (developed during preparation)

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## Analysis of leakage: Uganda

- PETS found an average 87 percent leakage of funds between districts and schools
- Large differences among schools:
  - ▶ 73 percent of schools: more than 95% leakage
  - ▶ 10 percent of schools: less than 50%
- Major cheating: prices of in-kind items
  - ▶ increasing unit prices with assent of suppliers
  - ▶ corrupt procurement practices

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## Analysis of leakage: Uganda (ctd)

- Analysis of variations: leakage is lower in schools that can bargain with districts
  - ▶ schools with large number of students, better-off parents, more qualified staff (see graphs)
- Tentative explanation:
  - ▶ only district officials know amounts transferred
  - ▶ they keep part of school grants for other uses
  - ▶ only large, rich, well-staffed schools can compel district officials to give them more

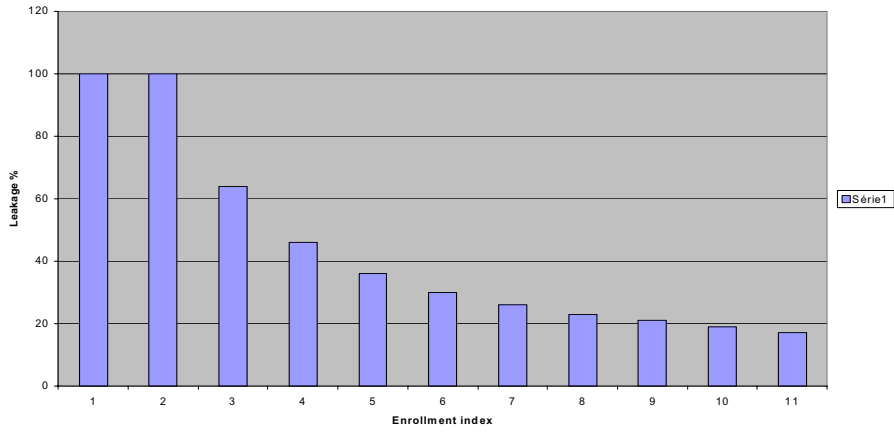
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## Uganda: leakage and enrolment

LEAKAGE AND ENROLLMENT



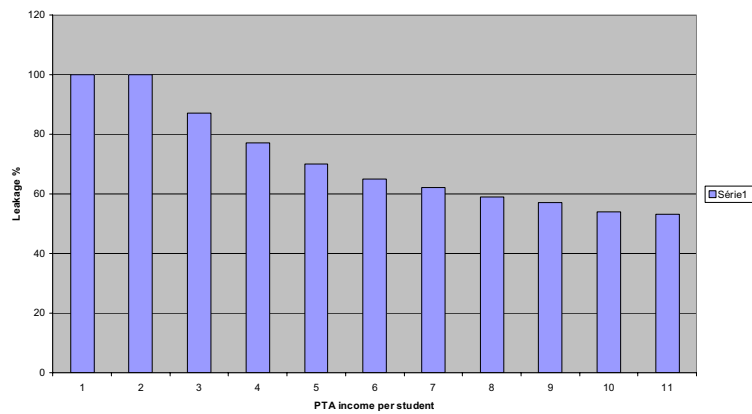
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## Uganda: leakage and PTA income

LEAKAGE AND PTA INCOME

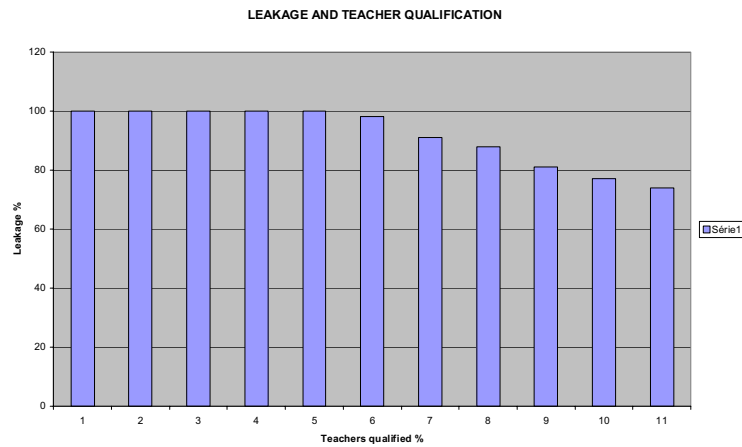


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## Uganda: leakage and qualified teachers



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## Analysis of leakage: Peru

- A high proportion of funds sent by central level were spent for IU administrative costs
- 50% of non-wage funds reach the schools
- PETS found that in 25 percent of schools the IU had not paid electricity as it should
- For consumption goods the average leakage was small (2.5 percent)

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## Analysis of causes: Peru

- Why is non-wage fund leakage much lower in Peru than in Uganda?
- SIAF system renders budget disbursement process quite transparent
  - ▶ *Each IU expense must be registered through SIAF before the resource is transferred*
  - ▶ *These amounts are immediately known and can be accessed by the general public*

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## Analysis of leakage: Zambia

- PETS found major difference in leakage
  - ▶ *90% schools received rule-based allocations*
  - ▶ *20% only received any discretionary fund*
- Discretionary funds are released in very large amounts
  - ▶ *are they provided for school building projects?*
  - ▶ *or have schools receiving these funds greater bargaining power with district administration?*
  - ▶ *study is not conclusive on this point*

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## Analysis of equity: Zambia

- Rule-based funds favour poorer schools
  - ▶ *no leakage, \$600 per school*
  - ▶ *schools in poor, rural areas (small enrolments) receive higher rule-based funds per pupil*
- Discretionary funds favour richer schools
  - ▶ *go to wealthier schools in rural districts*
  - ▶ *wealth neutral in urban districts*
- Rule-based = 30% Discretionary = 70%
- All in all, the system does not help the poor

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Phnom Penh – June 2004

## IS PETS A RELIABLE TOOL TO REMEDY LEAKAGE AND CORRUPTION?

Jacques Hallak and Muriel Poisson

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1



## I. Usefulness of PETS re. financial leakage?

*PETS provides hard data on the leakage of funds,  
and hence helps to improve transparency*

*PETS results, properly disseminated, contribute to  
accountability*

*PETS can reduce leakages in education funds*

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## 1. PETS, hard data and transparency

### Evidence from PETS: non-wage funds

Country	Year	Fund	Sample	Leakage
Ghana	1998	Nonwage	126	9p.c.
Peru	2001	Utilities	100	30p.c.
Tanzania	1998	Nonwage	45	7p.c.
Uganda	1995	Capit. grt	250	87p.c.
Zambia	2001	Fixed grt	182	10p.c.
Zambia	2001	Discr. grt	182	0p.c.

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## 2. Dissemination and accountability

Changes registered in Uganda, after survey results were released:

- Accountability and information dissemination legally provisioned (Local Governance Act)
- Monthly transfers of public funds to districts reported in the main newspapers and broadcast on radio
- Transfers to primary education displayed on public notice boards in each school and district centre (monitored by the MOE)
- Central supply of construction and other materials replaced by school-based procurement
- Effort made to institute basic public accounting systems that include districts
- Detailed data on spending on teacher salaries available at central level

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### 3. Reduction of leakage

Table 1. Summary information on capture (in percent)

	Mean	Median	St. dev.	Max	Min	Obs
<i>All schools</i>						
1995	23.9	0	35.1	109.8	0	229
2001	81.8	82.3	24.6	177.5	9.0	217
	Mean (1995)	Mean (2001)				
<i>Regions</i>						
Central	24.3	92.8				
North	26.7	102.4				
Northwest	11.2	90.3				
West	24.0	71.6				
Southwest	21.1	83.3				
East	20.1	62.4				
Northeast	36.0	73.4				

a. Grants received as share of entitled grants.

Source: « Power of information », by Reinikka and Svensson (2004)

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### 4. Use of PETS for policy-makers

- To understand how funds are actually spent
- To locate and quantify fund leakages
- To analyse the allocation of funds to different levels
- To initiate reforms aimed at:
  - ▶ *fighting the leakage of funds*
  - ▶ *increasing the resources of schools*

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## 5. Use of PETS for researchers

- To observe the results and activities of schools and teachers
- To inform policymakers and parents on how budgets are used to provide services
- To identify staff incentives and their consequences
- To demonstrate political aspects of education financing

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## II. Minimum requirements

1. *Political commitment and country ownership*
2. *Causes and location of leakages well documented*
3. *Voice complaints followed by publicized sanctions*

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## 1. Political commitment and country ownership

- PETS is not a pure research initiative, it starts with a government commitment to reduce leakage and improve transparency in the use of public resources
- PETS cannot be led by external agencies without the direct involvement of national authorities
- PETS require participatory procedures to promote ownership among stakeholders
- PETS is not a one-shot initiative: it should be part and parcel of management style: it should be carried out regularly on a routine basis
- Hence PETS should be sustainable: there is a need for both capacity building, participatory procedure and ownership

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## 1. Political commitment ... (ctd)

Example of Peru:

*“The actual implementation of these policy recommendations however faces several obstacles. The study and its dissemination occurred at difficult times for the country in general and for the education sector in particular. Peru was coming out of political crisis and authoritarian decade that concluded with the installation of a transitional government. The new democratic environment was accompanied by the strengthening of the national teachers union (SUTEP) which started to play a determinant role in the sector and attract most of the efforts and time of the education public authorities. There have been four Ministers of Education during the last four years”.*

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## 1. Political commitment ... (ctd)

*“In general, to increase the possibilities of generating a real policy impact, it is important to undertake this type of research with the support of the key authorities from the beginning of the project and involve them as much as possible in the process of building ownership, possibly by including their comments and even related worries in the study design”.*

Extract from Lorena Alcazar, 2003.

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## 2. Causes and location of leakages documented

Example of Zambia:

- Rule-based = 30% Discretionary = 70%
- PETS found major difference in leakage
  - ▶ 90% schools received rule-based allocations
  - ▶ less than 6% received any discretionary fund
- Rule-based funds favour poorer schools
  - ▶ no leakage, \$600 per school
  - ▶ schools in poor, rural areas (small enrolments) receive higher rule-based funds per pupil
- Discretionary funds favour richer schools
  - ▶ go to wealthier schools in rural districts
  - ▶ wealth neutral in urban districts
- All in all, the system does not help the poor

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### 3. Voice complaints followed by publicized sanctions

Example of Uganda:

- By giving schools access to information about their entitlements, head teachers and parents could themselves monitor the local administration and voice complaints if funds did not reach the schools
- At the school level, parents could better monitor the head teacher and voice complaints in case of any suspected misconduct in the use of received funds
- Following the first PETS in 1996, crack down on officers found to be misusing public funds, signalled strengthened oversight by the central government

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## III. Meaning of leakage?

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### III. Meaning of leakage?

- Reference to Administrative/political settings is a **must**
- Transfers of public expenditures follow a centralized or/and decentralized scheme
- Countries with autonomy at regional/sub-regional and school level
  - ▶ *Interpretation issue: rate below 100%, does it mean automatically corrupt practices? What if above 100%?*
  - ▶ *Fungibility of budgets*
  - ▶ *Conflict resolution between elected representatives and active CSOs on resource allocation*
- The problematic of “social control” of expenditures © IIEP-UNESCO

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### IV. Scope of PETS

*PETS of relevance in education finance*

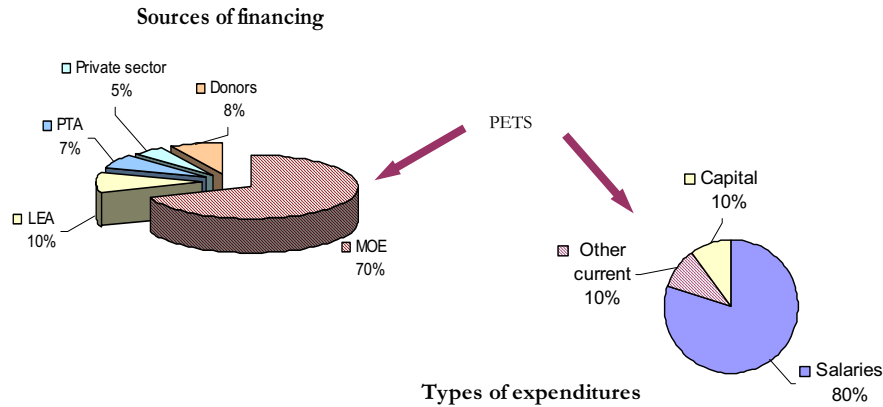
*Various management problems require a variety of instruments for investigation*

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## 1. Scope of PETS: some areas of financing



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## 2. Scope of PETS: monitoring salary costs

- Experience demonstrates PETS' difficulties in tracking teacher salaries.
  - ▶ *Peru: Wrongdoing is probably more serious in the area of payroll and personnel – a worrisome result given that more than 90% of the public resources allocated to the public education system are destined to payroll expenses.*
- Other approaches being used, including surveys of absence of teachers.
  - ▶ *In Honduras, ghost teachers were estimated at 5% (2000).*
- However, salary costs are closely linked to management of teachers.
  - ▶ *In Colombia, between 2001 and 2002, it was possible to increase enrolment by 50% without increasing the number of teachers. Saving has been possible thanks to: unified data bank; computerised models for cross-checking data, for comparing demands by teachers and requirements of schools etc.*



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### 3. Scope of PETS: monitoring capital costs

- No tracking of expenditures on school building: beyond tracking transfer of funds (donors/MoF) to local authorities, the need for transparent procurement
- **Procurement** for buildings: need **for audit** of procedures, firms involved, agreements reached; as well as service and products delivered.
- Example: pre-procurement approach was adopted by New York City in its campaign against corruption in school construction contracts.
  - ▶ *The New York City School Construction Authority's Office of the Inspector General now pre-qualifies – using forty page questionnaires – every firm that hopes to be considered for school construction contracts.*
  - ▶ *“A number of firms have made it clear that they fear the administrative sanction of disbarment far more than a criminal prosecution”.*
  - ▶ *Over five years, the process coupled with other administrative sanctions has worked well in breaking the back of corruption.”(Klitgaard)*



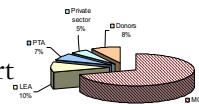
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### 4. Scope of PETS: monitoring non public income

The case of illegal fees:

- There is a need for household surveys or report card surveys
- The merit of report card techniques using participatory diagnosis, involving pupils, students, and PTAs



Amount of illegal fees collected in 8 Upzillas in Bangladesh

Admission into primary schools	73 876 BDT
Entertaining government officers	435 049 BDT
First-term examination fees	6 102 893 BDT
Second-term examination	6 069 765 BDT
Annual examination	6 086 059 BDT
Total (including other fees)	19 849 000 BDT

Source: IIEP

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## V. Beyond PETS: the challenge of combating corruption in education

*Academic fraud*  
*Private tutoring*

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### 1. Broader perspective: academic fraud

- **Academic fraud** – examinations and tests require **surveys among enrolments** in the first year of higher / secondary education to test assumptions about the causes of the fraud in entrance exams; it may require surveys among people administering exams or **audits of firms** in charge of managing tests, etc.
- Strategies followed by the USA:
  - ▶ *Development of antiplagiarism software*
  - ▶ *Passing state laws which address dishonesty in the form of cheating in college entrance exams and punishing diploma mills*
  - ▶ *Creation of examination and research watchdogs and whistle-blowers (federal oversight agency and office of research integrity)*
  - ▶ *Publishing examples of misconduct and procedures for dealing with them*
  - ▶ *Training programmes related to legal rights and responsibilities within the academic community*

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## 2. Broader perspective: Private tutoring

- **Private tutoring requires surveys** on the scope, magnitude, causes and determinant of PT. PT is not a minor source of corruption; it can undermine mainstream education (curriculum, methods of teaching, etc.).
- Strategies followed by Taiwan:
  - ▶ *Dominance of the examination system reduced*
  - ▶ *Academic 'busciban' forbidden to enrol primary school students*
  - ▶ *Secondary school students not allowed to have tutoring classes from Monday to Sunday noontime*
  - ▶ *Establishment of adequate regulations for private centres, with clear criteria for registration*
  - ▶ *Creation of an association of tutoring schools functioning as a self-regulating body*

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## Conclusion

1. PETS is a reliable tool for reducing leakage and curbing corruption in specific areas of public finance and under appropriate requirements. Two principles should be kept in mind: political commitment to improve ethics in education management; social ownership of PETS
2. Corruption in education cannot be addressed piecemeal, it requires an integrated strategy, covering various manifestations of corruption.
3. Therefore we should combine PETS with other tools, including other surveys, auditing, accounting, unifying databanks, report card, etc.
4. Tools are necessary but not sufficient in successfully achieving a reduction of corruption in education. Changing behaviour, emphasizing ethical values, ensuring broad participation, fostering ownership and genuine commitment both at the political level and of all stakeholders are equally needed.

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## **INFORMATION DISSEMINATION**

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## **INFORMATION DISSEMINATION**

- ▶ Start building anticipation of PETS information during planning and survey work stages of PETS.
- ▶ Task Force and likely consumers of the findings should be carefully selected.
- ▶ Prepare mailing list.
- ▶ Share all aspects of PETS at appropriate stages in a progressive manner.
- ▶ Prepare a concise report clearly explaining results from PETS and recommendations and present to Task Force and other consumers.
- ▶ Avoiding personal and institution specific findings.

### **Continued**

- ▶ Presentation must be specific aiming at initiating appropriate changes to minimize capture and improve provision of quality education.
- ▶ Use appropriate media and for a a to reach wider audience.

#### Uganda case on information dissemination:

- ▶ Task Force 3 meetings, Donors 3 times, NGOS 2, Cabinet Ministers 1; multiplier effect and application into program designs;
- ▶ MOEYS institutionalizing PETS.
- ▶ MOH next introduced PETS.
- ▶ Public information display in newspapers is the norm of public expenditure management; showing monthly district financial transfers by type of expenditure (18 in number).
- ▶ Projects operating in specific locations use the same modality.



IIEP/ITC 248 - Exercise  
Paris, 07 June 2004  
Original: English



International Institute for Educational Planning  
7-9, rue Eugène Delacroix, 75116 Paris, France

**International course on:**  
***"Public Expenditure Tracking  
Surveys in Education [and Health]"***

***Phnom Penh: 21-30 June 2004***

## Ruritania exercise

IIEP Project on:  
"Ethics and corruption in education"



## EXERCICE OVERVIEW

### LEARNING OBJECTIVES

1. To develop awareness of the magnitude and harmful consequences of corruption in education.
2. To train participants in the design and implementation of *Public Expenditure Tracking Surveys* (PETS) aimed at measuring the magnitude and analyzing the causes of public fund leakage.
3. To call attention on the benefits of organizing such surveys and disseminating their results to fight corruption.

At the end of the course, participants should be able to participate meaningfully in all the steps of a PETS.

### COURSE CONTENT

This will be a hands-on, practical course, which will consist mainly of group work. Groups of 5-9 participants will be assigned exercises to train them in the major tasks involved in the preparation, design, implementation and analysis of a PETS on pre-university education, as well as in using its results to alleviate corruption. The country concerned will be Ruritania, a fictitious country.

The tasks assigned will be divided into four sections:

- ▶ *Section 1: Preparing the PETS*
- ▶ *Section 2: Designing the PETS*
- ▶ *Section 3: Implementing the PETS*
- ▶ *Section 4: Analysis and follow-up.*

Group work on each section will be preceded by a lecture presenting the methods used by PETS, giving concrete examples, and describing the tasks to be performed by the working groups. At the end of group work on each section, a plenary meeting will discuss the papers produced by each group and present other possible solutions to the exercises.

---

## SOURCES

Participants will receive the following documents:

- ▶ Public Expenditure Tracking Surveys in Education by Ritva Reinikka and Nathaniel Smith, IIEP UNESCO 2004;
- ▶ Information on Ruritania and its educational system, including educational financing;
- ▶ Sample Questionnaire, PETS, Primary School Survey, IIEP, The World Bank;
- ▶ District Education Office Questionnaire, Zambia QSDS (Education), The World Bank;
- ▶ Research Assistants Survey Manual, Papua New Guinea PETS, The World Bank.



## Exercise 1.1

### Objectives and issues

#### LEARNING OBJECTIVES

To apply the approach recommended in the course documents (especially in 'Public Expenditures Tracking Surveys' by R. Reinikka and N. Smith) on a concrete example.

#### EXPECTED RESULTS

At the end of the exercise, participants will be familiar with the methods used to define the objectives of and the major issues to be examined by a PETS in the field of education.

#### EXERCISE

Suppose your group is preparing a PETS concerning primary education in Ruritania and has been asked to write a *preliminary paper* justifying and briefly describing the survey. As a first contribution to this paper, your group will define the objectives and main issues of the PETS by answering the questions below.

1. Formulate the objective(s) of the PETS. (Of course this formulation might be changed after in-country consultations). Your formulation should justify the PETS, i.e. explain why the survey is needed and why it would benefit the country and the people of Ruritania. This justification should be supported by country data.
2. Formulate two key research questions that the PETS will have to explore concerning the funding and delivery of educational services in Ruritania.
3. Formulate your tentative answers to the research questions.
4. Briefly describe the various investigations the survey will have to conduct in order to meet these objectives.

---

## SOURCES

Before discussing the group's response with your colleagues, please read attentively:

- ▶ the document "Information on Ruritania and its educational system", and
- ▶ point 1 a and b of Chapter 4 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 47-50).

Also reflect about your experience in your country or other countries.

## Exercise 1.2

### Resource flows for primary education

#### LEARNING OBJECTIVES

To make a preliminary analysis of the flow of government resources for education on a concrete example, and to discuss the opportunities such a structure offers for corruption.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to analyze the flow of public funds for education in a country and detect the opportunities it offers for corruption.

#### EXERCISE

In this second exercise, your group will contribute to the PETS *preliminary paper* for Ruritania by analyzing the structure of the government's resource flow for primary education, as it is described in the document "Information on Ruritania and its educational system". Your analysis could, among others, include the following points:

1. Draw up a provisional graph of the government's resource flow for primary education, including the funds concerning textbooks. An example of a similar graph is shown below.
2. On the basis of your experience, discuss the opportunities for corruption offered by this pattern of resource flow. What corrupt practices could arise from such opportunities?
3. Write a one-page paper summarizing the views of your group about opportunities for corruption in Ruritanian primary education.

---

*Non-wage expenditure  
(materials and running costs)*

*Wages  
(teachers' salaries)*

*Capital expenditures  
(classroom construction)*

*M O L D*

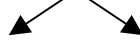


*Districts*



*Schools*

*M O E*



*Bank accounts*



*Teachers*

*Districts*



*Schools*



*Teachers*

*PTA'*

---

## Exercise 2.1 Sampling

### LEARNING OBJECTIVES

To train participants in the design and selection of a scientific national probability sample.

### EXPECTED RESULTS

At the end of the exercise, trainees will be able to design and select a scientific national probability sample of schools (and students), and to provide training for other staff in the Ministry

### TASKS

Your group will contribute to the *preliminary paper* concerning the Ruritania PETS by preparing a provisional *sampling strategy* for the survey.

More specifically, your group will:

1. Describe the target population of a study with a clear distinction between desired and defined population.
2. Distinguish scientific sampling from non-scientific sampling.
3. Examine through an experiment the differences in the accuracy in a variety of probability sampling.
4. Identify the sources of bias and error in a given sample design.
5. Define the sample design parameters.
6. Utilize the sample design tables for given structural and financial constraints.

7. Utilize the random number tables for a selection of pupils at a school.
8. Utilize the sample design manager (SAMDEM) software on a national list of schools.
9. Calculate sampling weights using the probability of selection.
10. Interpret tabulated results taking into account the size of sampling errors.

### Construction of a sampling frame and target population

A sampling frame is basically a list of elements in the population in the form of a computer-readable data file (Excel, Access, ASCII, SPSS, dBase).

If the survey is about Grade 5 pupils, then the file should contain the following information:

Official School Registration Number (\*)  
 Official School Name (\*)  
 Official Name of "Ministry of Education Administrative Region" (\*)  
 Official Number of "Ministry of Education Administrative Region" (\*)  
 Stratification Variable 1: For example: "School Location (Urban/Rural)"  
 Stratification Variable 2: For example: "Government/Private"  
 Grade 5 pupil Enrolment (\*)

Note: The variables marked with an asterisk (\*) are compulsory - whereas the two extra Stratification Variables would be useful for teaching purposes.

In our example, we will use an Excel file, which contains 2984 primary schools in country X. On each record, there are following information:

Position 1: Unique School ID  
 Position 2: Province Name (24 provinces)  
 Position 3: District Name (179 districts)  
 Position 4: Unique School Name  
 Position 5: School Location (1=Urban; 2=Rural; 3=Remote)  
 Position 6: Geographical Region (1=South East; 2=South West; 3=Central; 4=West)  
 Position 7: Measure of Size

Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Position 7
1020103001	Banteay Meanc	Mongkol Bor	Banteay Nea	2	3	1197
1020109003	Banteay Meanc	Mongkol Bor	Khilek	2	3	490
1020112002	Banteay Meanc	Mongkol Bor	Dang Run	2	3	245
1020115007	Banteay Meanc	Mongkol Bor	Prey Chan-H	2	3	259
1020118004	Banteay Meanc	Mongkol Bor	O Andaung	2	3	266
1020203009	Banteay Meanc	Mongkol Bor	Anlung Thng	2	3	567
1020209010	Banteay Meanc	Mongkol Bor	Bat Trang	2	3	504
1020305012	Banteay Meanc	Mongkol Bor	Chamnom	2	3	714
1020309016	Banteay Meanc	Mongkol Bor	Raung Ko	2	3	483
1020313014	Banteay Meanc	Mongkol Bor	Dang Trang	2	3	287

This sampling frame contains the desired population (the population for which the results are ideally required). You can operationalize the target population by defining the excluded population. Example:

- a. schools affected by war conflict / hazards
- b. schools that are too isolated / too small

The following screens show how to excluded schools that have less than 50 pupils and its results.

## Step 4

### Define Population

## Sample Design Manager

Desired		Defined		Total Excluded	
Schools	Students	Schools	Students	Schools	Students
2984	1226708	2971	1226127	13	581
				0.44%	0.05%

Excluded_1	
Schools	Students
13	581
0.44%	0.05%

Excluded\_1 : Measure of Size < 50

### Sample design parameters

You have to first decide or obtain information on (a) stratification variables, (b) effective sample size, (c) coefficient of intraclass correlation ( $R_{oh}$ ), (d) minimum cluster size, and (e) pseudo school parameter.

#### (a) Stratification variables

This information will be used in Step 5 in order to divide the population into sub-populations, or strata, for which the sampling will be conducted independently.

STRATUM VARIABLES
?
X

## STEP 5

*Select the Stratification*

OK

Cancel

1st Variable: Geo-Region

2nd Variable: (null)

3rd Variable: (null)

4th Variable: (null)

5th Variable: (null)

6th Variable: (null)

Maximum number  
of strata

4



### (b) Effective sample size

This information will be used in Step 9. The effective sample size is the size of a simple random sample that would provide the same sampling accuracy as your two-stage cluster sample. Therefore, by choosing the value of the effective sample size, you are in fact pre-determining the required level of sampling accuracy for your two-stage cluster sample.

### (c) Coefficient of intraclass correlation (Roh)

If you are taking one pupil from each school, this Roh does not affect the size of sample required, therefore this step is optional.

The Roh for your target population is also used in Step 9. This value indicates how much of the overall variation among students can be attributed to variation among schools. The Roh value varies between 0 and 1 with 0 representing only chance variation among school means, and 1 representing all variation due to among school sources and no variation within schools.

### (d) Cluster size

This value - also used in Step 9 - indicates the number of students that will be tested in each school. If this figure is 1, it is the same as simple random sampling.

### (e) Pseudo school parameter

This information will be used in Step 7 in order to obtain the list of pseudo schools. It is the minimum measure of size that each school should have in order to be considered as a school in its own right in the sampling frame. If the measure of size for a school is less than this value, then the school must be combined with a nearby school to form a pseudo school.

**PARAMETERS** [?] [X]

## Step 9

*Allocate Proportional Sample across Strata*

Parameters

Effective Sample Size (ESS) (> 100)

Coef. of Intra-class Correlation (Roh)

Number of pupils to select within school (Minimum Cluster Size)

Sampling Accuracy

Percentage =>  %

Standart Deviation of Mean =>  s

Design effect

Design Effect (Deff) =>

Sample Size

Total number of schools =>

Total number of students =>

## Step 9

**Allocate Proportional Sample across**

SRM - Design Manager

N°	Stratum Geo-Region	Defined		Pct.	Allocation across strata					
		Std.	Schl. (Pseudo)		Schools			Measure of Size		
					Exact	Planned	Option	Number	Pct.	
1	1	498785	1123	1123	40.7%	162.7	163	163	163	40.8%
2	2	271572	715	715	22.1%	88.6	89	89	89	22.3%
3	3	243474	593	593	19.9%	79.4	79	79	79	19.8%
4	4	212296	540	540	17.3%	69.3	69	69	69	17.3%
Grand Tot:		1226127	2971	2971	100.0%	400.0	400	400	400	100.0%

ESS : 400  
Roh : 0.3  
MCS : 1

After this using the random starter and the intervals determined by the number of schools in each stratum, schools will be selected using the probability proportionate to size (PPS) sampling.

- ▶ For guidelines on sampling and stratification, see point 2 of Chapter 4 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 54-57).

## Exercise 2.2

### School questionnaire

#### LEARNING OBJECTIVES

To give participants an opportunity to study a PETS school questionnaire in depth, and learn how to adjust it to a different education system.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to participate meaningfully in the preparation of a PETS school questionnaire.

#### EXERCISE

In this exercise, as part of the *preliminary paper*, your group will propose an adaptation of the *Sample questionnaire* to be used for the Ruritania PETS.

First read attentively the Sample questionnaire. Then your group will meet and do the following tasks:

1. Delete redundant questions:
  - ▶ either because they are not applicable to Ruritania (e.g. Section I, question 6: there is no private education in Ruritania),
  - ▶ or because they would be unnecessary given the PETS's objectives and key research questions as defined in Exercise 1.
2. Modify questions to adapt them to Ruritania as required.
3. Add questions that you consider important for the PETS and have been overlooked in the sample questionnaire.

4. Write a short paper explaining what you have done and why.

---

#### SOURCES

- ▶ As a reference, a *Sample questionnaire* has been distributed to you.
- ▶ For guidelines on questionnaire design, see point 2 of Chapter 4 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 57-62).

## Exercise 2.3

### DEO questionnaire

#### LEARNING OBJECTIVES

To teach participants how to write a DEO questionnaire to match a school questionnaire.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to participate meaningfully in the preparation of PETS questionnaires addressing other levels than schools.

#### EXERCISE

Your group will design the outline of a questionnaire for District Education Officers in Ruritania to match the questionnaire for schools reviewed in the previous exercise.

1. Define the various sections in the DEO questionnaire.
2. Prepare the lay-out and the headings of the section on funds received and distributed (in cash / cheque or in kind) by the DEO for the needs of the district's primary schools.
3. Define the data to be collected in each section.
4. Write a short paper explaining what you have done and why.

---

## SOURCES

As a reference, the questionnaire for DEOs used by the World Bank in the Zambia PETS has been distributed to you.

## Exercise 3.1 Staffing

### LEARNING OBJECTIVES

To train participants in making appropriate plans for hiring the staff necessary to implement a PETS.

### EXPECTED RESULTS

After the exercise, trainees will be able to contribute usefully to the recruitment of staff for a PETS.

### EXERCISE

Your group will continue its work on the Ruritania PETS *preliminary paper* by estimating the staff required for the PETS. Your estimate will be based on:

1. the data available about Ruritania;
  2. the objectives, sampling strategy and questionnaires you have proposed in the previous exercises; and
  3. a sample which covers 250 schools and 20 districts.
- ▶ The survey will presumably be supervised by a Government Task Force composed of high-level officials. Do not include them in your estimates.
  - ▶ Your estimates should as far as possible be supported by arguments, e.g. the experience of previous PETS. Make a realistic estimate of the staff needed to perform the various tasks involved, add a contingency allowance for unforeseen difficulties, but avoid wasting the scarce resources allocated for the survey.



- ▶ Do not forget that the staff will have not only to prepare and implement the survey, but also to monitor its implementation, enter, compile and analyze the data, prepare the report and make arrangements to disseminate the results.
- ▶ Think about the kind of people you want as staff members: researchers from the University (e.g. sociologists), from the statistical institute, private consultants, students, others? Remember that officials of ministries of education are not acceptable in a PETS because they are part of the education hierarchy.
- ▶ Please list the staff required as in the example below:

---

Category	Tasks	Education/ experience	Numbers
Researchers	Preparing, organizing, supervising survey	College degree, Experience of surveys	8
Enumerators	Data collection Data entry/compilation	Senior teachers Students	38

---

*Note: This table is not a model but just an example showing how you could present your estimates.*

---

## Exercise 3.2 Implementation and Monitoring

### LEARNING OBJECTIVES

To train participants in planning the activities of a PETS, as a first step in planning the resources required.

### EXPECTED RESULTS

At the end of the exercise, participants will be able to participate meaningfully in the planning of a PETS.

### EXERCISE

Your group will plan the sequence of data collection and monitoring activities to be undertaken by the team during implementation of the Ruritania PETS. Please list these activities in order of time from the earliest to the last. The list should include the number of institutions to be visited, the staff involved, and an estimate of the time required, allowing extra time for unforeseen difficulties. Do not forget to include staff and time for monitoring. The implementation period should not exceed 18 months.

1. Write a short text explaining the sequence of activities. Then list the activities as in the following example.
2. Draw up a bar graph of the time schedule showing the distribution of activities over time.

Activity/ level	N° institut. visited	Staff involved	Time required
Data coll/ Central	20	4 researchers	4 weeks
Data coll/ Regions	20	4 researchers	4 weeks
Data coll/ Districts	40	4 researchers 4 enumerators	8 weeks
Data coll/ Schools	200	4 researchers + 40 enumerators	16 weeks
Data compilation		4 researchers + 40 enumerators	4 weeks

Activity/ level	2005						2006					
	July	Aug.	Sep	Oct	Nov	Dec	Jan.	Feb.	Mar.	Apr.	May	Jun.
Data coll/ Central	XXX											
Data coll/ Regions		XXX										
Data coll/ Districts			XXX	XXX								
Data coll/Schools		XXX	XXX	XXX	XXX							
Data compilation						XXX						

Notes:

1. *The above table and graph are not models but just examples showing how you could present your proposals.*
2. *In the above graph, the researchers in charge of a regional survey team is supposed to divide his/her time between the collection of region and district data and the monitoring of school visits by enumerators.*

- ▶ For guidelines on PETS implementation, see point 3 of Chapter 4 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 62-65).

## Exercise 3.3

### Data Entry and cleaning

#### LEARNING OBJECTIVES

To give trainees a first hand experience of data entry and cleaning, with particular attention to checking the data entered carefully before finalizing the operation on each school.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to participate meaningfully in the training and supervision of data entry operators in a PETS.

#### EXERCISE

In this exercise, your group will learn how to enter and clean raw data from one school questionnaire (from Papua-New Guinea) into a spreadsheet (in this case an EXCEL sheet) in order to generate a set of data suitable for analysis. The EXCEL sheet ("Exercise 3.3") will be provided on a computer diskette.

Meet together in the group to prepare a short paper to present your conclusions about the Exercise, what you have learned and the difficulties met, at the Plenary discussion.

#### ① HELP

1. Those of your group who have never used EXCEL should first take a little time to practice it with the help of the experienced colleagues.

2. Open the EXCEL file entitled "Exercise 3.3". This file contains 4 sheets, numbered 1, 2, 3 and 4, where the data for each school are entered in succession. Each cell is divided into a large number of *cells* labeled A, B, C, D, on the horizontal line and 1, 2, 3, ...vertically. On each cell in the top row you will see the name of the question of the school questionnaire to be entered in the column below. For instance, on cell BV1 of sheet 2, you read "S1F14A". This means School survey (S1), section F (School Finances and Sources of Support) question 14 (Education subsidy in 2001, how much money was received?), column A (First quarter).
3. Enter the data from the questionnaire successively in the cells of row 2 of the spreadsheet (A2, B2, etc.). After entering the data from one page of the questionnaire, check carefully each data entered, then go to the next page.
4. You will not be able to enter all the data from the 26 pages from the school questionnaire. Enter only those from Sections A (Background), F (School finances and Sources of Support) and K (Data Appendix). Section A will be on Sheet 1 of the EXCEL file, Section F on Sheet 2, and section K on Sheets 3 and 4. Stop after 45 minutes as the task is rather repetitive.
5. 'Clean' the data entered. This is done automatically by some statistical programs, but you may wish to clean a first set of data by hand in order to better understand how the program operates. Cleaning consists in checking the data entered successively in order to exclude implausibly high or low values of some variables. To control for errors, you may have to do range checks. This is normally done at the end of the entry operation for a batch of questionnaires, but, since we have little time, we will do it for the data you entered from one questionnaire only. In the questionnaire, you will notice that some questions are answered '99' or '999'. These are not errors. According to the survey manual, '99' stands for 'don't know'. '999' is not mentioned in the manual, but apparently means 'not applicable', for instance questions about grades 1 and 2 in primary schools (which include grades 3-8 only). Don't correct those answers.

---

## SOURCES

- ▶ The questionnaire with the data to be entered will be handed to you separately.
- ▶ As a reference, the "Research Assistants Survey Manual" used by the World Bank in the Papua New Guinea PETS has been distributed to you.

## Exercise 4.1

### Data analysis 1

#### LEARNING OBJECTIVES

- ▶ To give trainees a first hand experience of how to calculate the leakage of funds on a spreadsheet.
- ▶ To teach those who have never worked on a spreadsheet the basic calculation formulas.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to participate meaningfully in the estimation of leakage from a set of data collected from questionnaires.

#### EXERCISE

In this exercise, you will make a first analysis of data from 77 questionnaires. Your group will calculate the average difference between the government subsidy received by schools and the subsidy they were supposed to receive, in other words the subsidy leakage. Then you will learn how to calculate the standard deviation, which measures the degree of dispersion of a set of data. You will do these calculations using the EXCEL mathematical formulas: e.g. the formula used to add up figures contained in cells A2 to M2 is: =SUM(A2:M2).

Meet together in the group to prepare a short paper to present your conclusions about the Exercise, what you have learned and the difficulties met, at the Plenary discussion.

#### HELP

Open the EXCEL file entitled "Exercise 4.1". The file contains a Table with the following data from 77 school questionnaires (a row for each school):

Column A	School number (the names of schools have been omitted)
Column B	Province
Column D	District
Columns E-T	Enrolments by grade and sex for last year
Column U	Total enrolment; e.g. $U2 = \text{SUM}(E2:T2)$
Columns V-Y	Govt. subsidy received in quarters 1, 2, 3 and 4 last year
Column Z	Total Govt. subsidy received; e.g. $Z2 = \text{SUM}(V2:Y2)$
Column AA	Govt. subsidy received per pupil; $AA2 = Z2/U2$
Column AB	Official Govt. subsidy per pupil (40 currency units)
Column AC	Official amount of Govt. subsidy for the school
Column AD	Leakage (Official subsidy minus subsidy actually received)
Column AE	Leakage percent of the official amount of Govt. subsidy
Column AF	School fees
Column AG	Project fees
Column AH	Other fees
Column AI	Total fees charged to parents
Column AJ	Total fees per pupil
Column AK	Percentage qualified teachers

1. Your first task is to fill columns AC, AD and AE, which have been left blank, by manipulating data in the previous columns with EXCEL arithmetic operators (+, -, /) and formulas (e.g. SUM). AC2 is evidently equal to the school enrolment U2 multiplied by 40, so  $AC2 = U2 * 40$ ; etc. You will quickly learn by practice how to use these formulas and copy them from cell to cell.
2. Also fill the bottom cell (80) of columns AC and AD to get the total of each column, e.g.  $AC80 = \text{SUM}(AC2:AC78)$ .
3. Calculate the standard deviation of the set of data on leakage percent in column AE. The standard deviation is an algebraic expression that tells you how tightly the various data in a normally distributed set are clustered around their average. If the standard deviation is small in relation to the range covered by the data, it means that the data are tightly bunched together; if the S.D. is large, then the data are dispersed. The S.D. is particularly useful to compare the distributions of two or more sets of data. In the EXCEL spreadsheet, you will calculate the S.D. for the data in column AE by using the function  $=\text{STDEV}(AE2:AE78)$ .



## Exercise 4.2

### Data analysis 2

#### LEARNING OBJECTIVES

To analyze the possible causes of fund leakage by exploring the variations observed among the schools and looking for correlations.

#### EXPECTED RESULTS

At the end of the exercise, trainees will be able to understand better and help in the data analyses undertaken by researchers to explore the causes of variations in leakage.

#### EXERCISE

In this second exercise on data analysis, your group will explore, within the sample of 77 schools, possible causes for the variations in subsidy leakage per pupil.

*Our initial hypothesis is the following:* in the school system represented by the sample, as in Uganda, the bargaining power of schools vis-à-vis their District Education Officers is the root cause of the major variations in leakage per pupil. In other words, larger schools (generally urban), schools where many students have wealthy parents, schools with a high proportion of qualified teachers, stand a greater chance of receiving a fair share of their govt. subsidy than small, poor, generally rural schools, whose students are poor and teachers unqualified.

You will examine how leakage per student varies according to:

- ▶ total number of students; and if you have time according to
- ▶ the wealth of parents, and/or
- ▶ the percentage of qualified teachers.

You will further examine whether and how strongly these pairs of variables are related by studying the statistical correlation existing between them. Here again you will use the EXCEL spreadsheet to draw the graphs and calculate the coefficients currently used in this kind of analysis.

Write a short paper to explain your conclusions from the above analysis.

## HELP

1. EXCEL enables you to produce a graph showing how the percentage of leakage varies with enrolment. To do this, first select column U in the spreadsheet you have worked on in Exercise 4.1. Then click **AZ ↓** on the Menu bar. The schools in the whole spreadsheet are now ranked from the smallest to the biggest. Column AE shows the percent leakages of these schools ranked according to the size of the schools. To produce a graph showing the variations of leakages according to school size, select column AE, then click the button "graph" on the Menu bar, choose the type of graph you want, and follow the instructions.
2. Look at the graph and at the data carefully. How would you interpret the variations detected by the analysis? Do they fit with our initial hypothesis?
3. If you have time you can do the same analysis for the variations in leakage according to the wealth of parents, or according to the percentage of qualified teachers (column AK). We shall consider total school fees per pupil (column AJ) as a proxy for the average wealth of parents in the school. To get the leakage figures ranked according to total school fees per pupil, select column AJ, then click the **AZ ↓** button in the Menu bar. Then you can also produce a graph showing the variations of leakage according to wealth of parents by clicking on the "graph" button of the Menu bar.
4. You could also calculate the correlation coefficients (or "r") measuring the strength of the relations existing between Enrolments and Leakage, etc. Correlation coefficients vary between -1.00 and 1.00. If the coefficient is close to 0, there is no relationship between the two variables; if it is close to +1 or -1 the correlation is strong. If r is positive, as one variable get larger the other also gets larger. If r is negative, as one gets larger the other gets smaller.

5. Look at the graph and analyze the data in column AJ carefully. Do they support our initial hypothesis?

---

#### SOURCES

Before discussing the group's response with your colleagues, you can read the analysis of the PETS results in Zambia, points 3 to 5 of Chapter 7 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 93-99).

## Exercise 4.3

### Dissemination of PETS results

#### LEARNING OBJECTIVES

To increase the participants' conviction of the need for concerted efforts to disseminate the results of the PETS. To review and discuss the various means available for this purpose.

#### EXPECTED RESULTS

At the end of the exercise, participants will be more convinced of the need to ensure the dissemination of PETS results and better prepared to plan and implement this essential phase of the survey.

#### EXERCISE

Your group will prepare a section of the Ruritania *preliminary paper* presenting a plan for the dissemination of the survey's results for a period of two months.

To start with, the following questions should be examined when preparing your plan:

- ▶ Who will be involved in the dissemination of the survey's results?
- ▶ Who should dissemination activities be addressed to?
- ▶ When will the dissemination activities begin? Should one wait until the summary report is published?
- ▶ Which activities would be the most beneficial and should get the preference given budget limitations?

Your plan could include such activities as:

- ▶ meetings with political leaders, government officials, particularly from the Ministries of Education and Finance, etc.;

- ▶ meetings with representatives of the civil society, such as teachers' unions, PTA's, NGO's, journalists, influential people;
- ▶ articles in newspapers and other printed media;
- ▶ radio and TV broadcasts and interviews;
- ▶ publication of excerpts of the summary survey report, or of its main conclusions, subject to the Government's agreement; etc.

Do not forget that the preparation of such activities takes time, particularly if audio-visual media or aids are to be used.

Finally, you should try to establish an accurate budget for the implementation of your plan.

---

## SOURCES

Before discussing the group's response with your colleagues, you can read the experience of Uganda's information campaign, point 4 of Chapter 5 in the book "Public Expenditure Tracking Surveys in Education" by Reinikka and Smith (p.p. 76-78).



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**International course on:**  
***"Public Expenditure Tracking  
Surveys in Education [and Health]"***

***Phnom Penh: 21-30 June 2004***

## Ruritania sources

IIEP Project on:  
"Ethics and corruption in education"



## CONTENTS

- I. Information on Ruritania and its educational system, including educational financing
- II. Sample Questionnaire, PETS, Primary School Survey, IIEP, The World Bank
- III. District Education Office Questionnaire, Zambia QDS (Education), The World Bank
- IV. Research Assistants Survey Manual, Papua New Guinea PETS, The World Bank



## INFORMATION ON RURITANIA AND ITS EDUCATIONAL SYSTEM

### BASIC DATA (2001)

<i>Area</i>	285 000 km <sup>2</sup>
<i>Climate</i>	Tropical ; one rainy season June to October
<i>Sanitary conditions:</i>	Malaria and AIDS endemic
<i>Regional administration:</i>	8 Regions:
	<ul style="list-style-type: none"><li>▶ <i>North:</i> A sparsely populated, dry pastoral area, its main resources are cattle raising, agriculture and tourism.</li><li>▶ <i>East:</i> Also a dry pastoral area, but fisheries, coconut plantations, industries and the economic activities around the main harbour of the country provide additional resources.</li><li>▶ <i>North central:</i> Main resources are provided by irrigated farming, mining and industries.</li><li>▶ <i>Central:</i> Urban and peri-urban areas around the national capital. Main resources come from commerce, public services and industries.</li><li>▶ <i>Southeast:</i> A densely populated, fertile plateau, where a variety of food and commercial crops are grown. Tourism is developing along the beaches.</li><li>▶ <i>South central:</i> Irrigated farming, mining and industries provide the main resources of this densely populated area.</li><li>▶ <i>Southwest:</i> A mountainous region, with small farms ; subsistence agriculture, coffee plantations and tourism provide the main resources.</li><li>▶ <i>Northwest:</i> Resources similar to those in the Southwest Region.</li></ul>

Table 1 below shows the main statistical data concerning the Regions. The annexed Map outlines the lay-out and boundaries of the 8 Regions and 45 Districts.

Regions	Area (sq. km 000's)	Population 000's	Pop. Density per sq km	Urban pop. 000's	N° Primary Schools	N° Districts
North	45	720	16	100	518	6
East	40	960	24	200	657	7
N. central	45	2,700	60	100	1,467	7
Central	21	4,200	200	3,500	2,338	5
Southeast	35	3,500	100	700	1,931	5
S. central	32	3,200	100	600	1,757	5
Southwest	42	1,680	40	100	1,074	6
Northwest	25	1,000	40	100	580	4
Totals	285	17,960	63	5,400	10,422	45

*Average distance Capital to District Headquarters:* 400 Km

*Average distance District Headquarters to Schools:* 50 Km

*Road conditions:*

- capital-districts: tarmac roads
- districts-schools: earth roads or tracks

*Total population* 18 million

*Population in urban areas:* 30%

*Average population growth rate:* 2.5% (cities 5.1%; rural areas 1.8%)

*Age structure of population:*

0-6	25.6%
7-12	17.4%
13 and over	57.0%

*Life expectancy at birth:* 53 years

*Adult illiteracy rate:* 39%

*Languages:* One major national language used in daily life and radio broadcasts; English second official language, taught in primary school, used in courts and major newspapers.

*Total working population:* 7.2 million

- in agriculture* 66%
- in mining and industry* 12% (including informal activities)
- in services* 22% (including informal activities)

*GDP per capita:* US\$ 310 at current exchange rates, US \$ 1,200 at purchasing power parity

TABLE 2 Enrolments and gross enrolment rates (2000/01)

Level of schooling	Enrolments	Gross enrolment rates
Primary	3,032,000	97%
Secondary	982,000	42%
general	920,000	
technical	62,000	
Teacher training	1,250	
Higher	30,000	1,8%

## THE ECONOMY

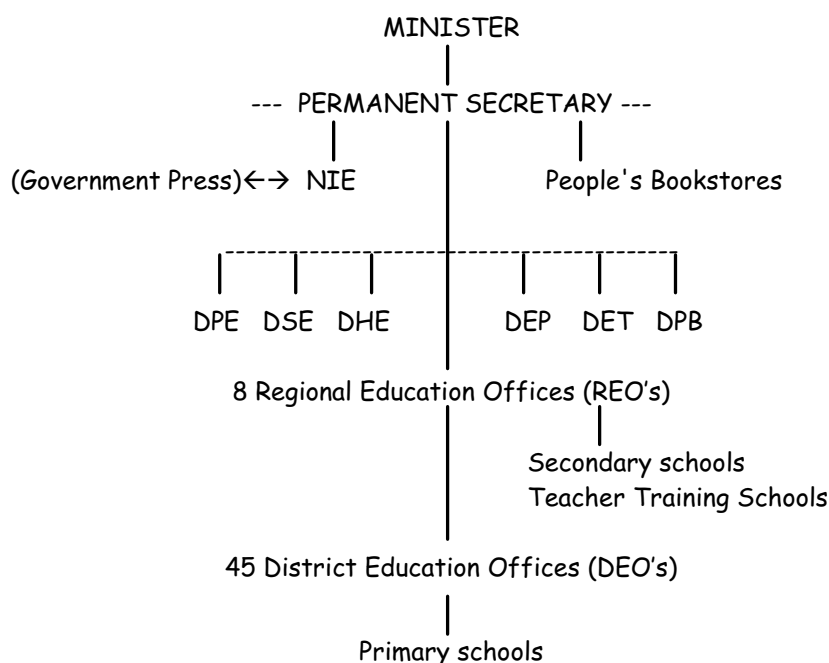
1. The chief economic resources of Ruritania are agriculture (rice, other foodcrops, cotton, cattle, hogs), fisheries, mining and some industry. Ruritania is almost self-sufficient for food.
2. Ruritania undertook a major economic reform programme in 1993 to shift from a strategy of heavy Government involvement and regulations to a process of liberalization and privatization, following an economic downturn in the 1985-1990 period. This approach, which includes a decrease in public spending and a freeze on the hiring of civil servants, has the backing of several bilateral and international aid agencies. The successful implementation of the reform programme during the 1990's has allowed the country to return to a situation of positive economic growth.
3. The Government's policy is to develop a market economy, facilitate the establishment and growth of private, including foreign, enterprises and stop the previous expansion of the public sector. Under the 2001-05 plan, it is expected that the real growth rate will reach 4.5% per annum, and will stabilize at that level in the medium term. This trend should allow consumer purchasing power to increase after 2005. Agricultural production will be the main engine of economic growth in the medium term. Although light industry makes a relatively small contribution to overall GDP, it will play an important role because it enjoys a high annual growth rate, as high as 10% in some branches.
4. Because of expected constraints, restrictions on public spending will be continued until 2005. However, human resources development will have priority, and major social services will be maintained, authorizing the appointment of new teachers.
5. Whether or not growth targets are actually reached will depend to a large extent on the amount of investment in private industry. Ruritania enjoys a certain number of advantages in this regard, making it an attractive place for

investors. In particular, it offers cheap labour and a well developed infrastructure. Nevertheless, the average productivity of Ruritania manpower is still low since there is a shortage of educated manpower in general, and of skilled workers in many branches. That weakness causes many companies to hesitate to invest in Ruritania. Firms needing critical skills have to turn to qualified foreign workers, and this increases the cost of labour per unit.

#### STRUCTURE AND ADMINISTRATION OF THE EDUCATION SYSTEM

6. The educational system in Ruritania involves six years of primary school, followed by three years of lower secondary, three years of upper secondary, and finally higher education available in three Universities. The language of instruction, which is also the official language of the country, is generally the mother tongue of most children entering primary school. In principle, primary school teachers should be trained for three years in specialised upper secondary schools called Teacher Training Schools (TTS); however many of them have not been trained for teaching. Teachers in secondary schools are university-trained. Separate institutions provide technical and vocational training at both lower and upper secondary levels. Boarding exists only in upper secondary, technical and teacher training schools.
7. All levels of the educational system are administered by the Ministry of Education (MOE), except for technical and vocational training which is the responsibility of a separate Ministry of Technical and Vocational Training (MTVT). There is no private education in Ruritania. Training in agriculture is offered by the Ministry of Agriculture. Other Ministries (Health, Defence, Social Affairs) also run special schools in their fields. Under the Minister's authority, the Permanent Secretary of the MOE co-ordinates the action of six Directorates: Primary Education (DPE); Secondary Education (DSE); Higher Education (DHE); Educational Planning (DEP); Examinations and Testing (DET); Personnel and Budget (DPB); and of the National Institute of Education (NIE), which is in charge of curriculum development and textbook production. Primary Teacher Training is under the Directorate for Secondary Education. There are 8 Regional Education Offices (REO's), and 45 District Education Offices (DEO's).
8. Educational administration in Ruritania is suffering from excessive centralization, cumbersome procedures, ill-defined responsibilities, and weak co-ordination between departments.

## MINISTRY OF EDUCATION SIMPLIFIED ORGANIZATION CHART



9. Outside the Ministry of Education, several institutions undertake research and training in the field of education. The Faculty of Human and Social Sciences of the Central National University does a lot of research on education, and its staff has experience in sample surveys. The Institute of Management Studies of the same University is unfortunately weak and unable to organize appropriate training for educational administrators. The Statistical Institute of the Ministry of Finance is responsible for the national census and has considerable experience in all kinds of surveys, including those concerning education.

### EDUCATIONAL FINANCING

10. Due to the priority given to human resource development, the Government of Ruritania increased expenditures in education during the late 90s. In 2001, it devoted the equivalent of \$154.1 million to education, which amounted to 10.7% of the government's operating budget and 2.76% of GDP. Of that total, \$147.8 million went to the MOE and the MVT. Table 3 (page 6) shows the distribution of these funds by level and category of expenditure and the unit costs.
11. In principle parents do not pay any school fees. However the schools charge them with contributions for school insurance, examination fees etc. In

In addition, parents support a levy for the schools' Parent-Teacher Associations (PTAs), which finance a substantial part of the schools' expenses for school buildings, educational aids (other than textbooks), and school feeding programs. Since 1990 the PTA levy per pupil has approximately doubled. It is now officially estimated, on average, at \$9.00 for primary schools, bringing the average annual cost supported by parents to \$11.3 per primary pupil, and the real amounts are said to be sometimes much higher. There are no Boards of Management in Ruritania's primary schools.

TABLE 3 Government Spending for Education in 2001 (MOE and MTVT combined) and Unit Cost per Student

	Government spending on education (in millions of US \$)					Unit costs (in US \$) a/
	Personnel	Others	Scholarships	Total	% a/	
Primary	52.9	20.0 b/	-	72.9	51.8	25.3
General secondary	20.2	12.2	2.2	34.6	24.6	39.5
Tech. and voc. secondary	1.6	2.1	0.3	4.0	2.8	67.7
Higher Education	12.7	4.5	12.0	29.2	20.8	1023.3
Central Administration	5.2	1.0	-	6.2		
Miscellaneous	0.5	-	0.4	0.9		
Totals	93.1	39.8	14.9	147.8	100	

Notes: a/ In the calculation of the percentage allocation of public education expenditure (Column 6) and the unit costs (Column 7) per level of education, expenditures for the central administration and miscellaneous items were distributed among the various levels of education in proportion to their direct expenses.

b/ of which 9.2 for educational materials, textbooks and supplies.

12. Primary and secondary education staff, including teachers, are paid directly by the MOE, either by transfer to their bank accounts, or in cash at District Treasury Offices.
13. Allocations for material expenses in primary and secondary schools (including those for classroom construction) are transferred, on a monthly basis, by the Ministry of Education to the relevant Regional Education Offices. These allocations are supposedly based upon those of the previous year, taking into account (a) changes in the Ministry's budget and (b) expected increases in regional enrolments. REO's manage and distribute the funds allocated to secondary schools and transfer those allocated to primary schools to the District Education Offices. DEO's manage and distribute these funds to primary schools, in kind or in money. The schools' financial records are not submitted to the central government.

## PRIMARY EDUCATION

### OVERVIEW

14. In 1992/93 Ruritania's primary education system featured a gross enrolment rate of 106 per cent and a net enrolment rate of 85 per cent. All of the nation's children would be currently going to school had enrolment continued to climb at the previous rate. Unfortunately, as Table 4 below shows, the situation deteriorated as from 1994/95. Not only enrolment is not going up, but indeed the number of children entering the first grade is stagnating whereas the school age population continues to increase. Although the number of new admissions is still about equal to the seven years old population, this phenomenon is causing considerable concern because one third of new entrants are older than seven.

TABLE 4 The Main Indicators for Primary Schooling in Ruritania (Enrolment figures given in thousands of students)

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Student enrolment	2,500	2,719	2,873	3,007	2,958	2,922	2,714	2,695	2,746	3,032 <sup>a/</sup>
Gross enrolment rate (%)	100.0	106.0	109.2	111.6	107.0	103.2	93.5	90.6	90.0	97.0
Net enrolment rate (%)	79.8	84.6	87.1	89.0	82.4	82.4	74.6	72.3	71.9	77.4
Students entering 1st grade	563	547	578	605	595	588	546	542	552	610
Children age 7 b/	485	497	510	523	536	549	563	577	591	606
Schools	7,194	8,324	8,984	9,335	9,960	10,450	10,261	10,245	10,092	10,422 <sup>c/</sup>
Teachers	61,867	70,569	76,171	78,570	82,140	87,221	86,631	87,571	85,812	86,828
Average repetition rate (%)	16.3	16.5	19.1	18.1	17.6	16.8	18.6	18.1	19.8	
Average dropout rate (%)	5.3	5.9	8.8	13.9	14.8	22.8	17.9	16.5	11.2	
Average n° of pupils per teacher	40.3	38.4	37.6	38.2	35.9	33.4	31.3	30.7	32.0	34.9
% of primary education government budget spent on education materials	5.4	5.3	6.2	7.1	9.3	9.4	10.6	10.6	11.6	12.6

a/ of which 1,163 in cities

b/ the official age of admission to primary schools is 7

c/ of which 814 in cities

TABLE 5 Enrolment Figures by Grade and by Sex (2000/01)

	1st grade	2nd grade	3rd grade	4th grade	5th grade	6th grade	Total
Boys	389,418	290,521	254,515	229,422	223,058	173,777	1,560,711
Girls	380,766	288,653	245,601	216,314	204,485	135,509	1,471,328
TOTAL	770,184	579,174	500,316	445,736	427,543	309,286	3,032,039

15. The stagnation in admissions to primary education is partly due to the fact that education is now less popular than it was formerly in Ruritania. There are three main reasons for this:

- ▶ The cost of education is unaffordable for many parents, as PTA levies have increased (paragraph 11) and disposable family incomes dropped.
- ▶ The civil service has put a freeze on all job hiring (paragraph 2), giving parents the feeling that education no longer guarantees their offspring a job in the modern sector.
- ▶ The quality of education has declined, owing to the scarcity of instructional materials, despite an increase in government funding and a marked drop in the number of pupils per teacher (Table 4, page 7).

16. The decline in educational quality despite an increase in the costs of education for parents and government make some people suspect that some of the government funds earmarked for schools' materials are not reaching their final destination.

#### GOVERNMENT PRIMARY EDUCATION POLICY

17. According to official statements the objectives of primary education are:

- ▶ To provide all children, free of charge, with the minimum learning required to enter working life or to continue their education at the secondary level;
- ▶ To base the content of education on national as well as universal values;
- ▶ To use the maximum thrift in managing the human and financial resources allocated for this purpose.



18. The quality of primary education is measured by the proportion of students who acquire, before they finish school, that minimum amount of knowledge, which prepares them for working or continuing their education. Basically that means learning the "Three R's". This measure actually combines two factors:
- ▶ *Internal efficiency*, i.e. the proportion of entering students who end up finishing primary school;
  - ▶ *Scholastic achievement*, i.e. the proportion of students who actually learn the minimum amount expected of them. Scholastic achievement will obviously be influenced by the inputs into the school system, i.e. the number and quality of teachers, their supervision, textbooks, school buildings and equipment, etc.
19. The following paragraphs present those data on the above aspects of primary education quality that are available for Ruritania, and relate these inputs to scholastic achievement.

#### Internal efficiency

20. Ruritania's primary school system has low internal efficiency, as shown by the repetition and dropout rates. In 1999/2000, 20 per cent of students were repeaters, and 44% dropped out or were excluded at some point during the cycle. On the average, including wastage due to drop-out/exclusion and repetition, the system spends 11.6 student-years instead of 6 to complete the training of one primary school leaver. A number of experienced Ruritanian teachers maintain that, under the present conditions, without repetitions and exclusions the quality standards in primary education would drop dramatically because students would have no incentive to work.

#### Scholastic achievement

21. Recently, on the Government's request, an evaluation survey of primary students' scholastic achievement was undertaken, using language and mathematics tests administered at both the beginning and end of the school year in a sample of classes representing the diversity of school conditions in the country. The survey found that, at the end of the school year, only 50% of second graders passed the achievement tests established by the NIE.

## *Teachers*

22. As can be seen from Table 4, during the last ten years the Government has made steady efforts to decrease the number of students per teacher in order to increase the quality of education. In 2000, the average was 34.9 against 40.3 in 1991.
23. All primary school teachers are members of the civil service. As such they can be dismissed only by decision of the Minister of Education, and for very serious misconduct. Teachers' Unions are powerful and watch carefully for possible transgressions of the Civil Service statutes. The standards of teachers have improved over the past decade. Nevertheless, their educational background is still low (Table 6). Only 10 per cent of them received pre-service training, because there was only one Teacher Training School before 1996.

TABLE 6 Educational Background of Primary School Teachers  
(% distribution by educational level) 1989-2001

Educational background	1989/90	1994/95	1998/99	2000/01
Upper secondary	11.8	12.0	18.4	22.2
Lower secondary	44.0	48.0	54.0	52.5
Primary	44.2	40.0	27.6	25.3

24. Average teacher annual salaries are as follows:

Teachers with higher education	\$ 892
Teachers with upper secondary education	\$ 699
Teachers with lower secondary education	\$ 552
Teachers with primary school education	\$ 433

## *Teacher Supervision*

25. There are 45 District Education Offices (DEO's), each with an average staff of 10 inspectors and education officers. In actual fact they do mostly administrative work because the DEO's are short of vehicles, and DEO staff have not been properly trained for their supervision function. As a result of this lack of supervision, it is suspected that there are numerous "ghost teachers". Moreover, teacher attendance is often irregular, particularly in villages, and teaching methods tend to stick to ineffective rote learning.

## *Curriculum*

26. The present primary education curriculum devotes 37 % of available instructional time to language skills --including reading and writing--, 18 % to mathematics, 20% to science, social studies and moral education, and the rest to music, art, physical education and manual work. The average instructional time is in principle 30 hours per week, although in practice it may be much lower for the reasons mentioned in paragraph 25.

## *Textbooks and school supplies*









27. In principle textbooks are provided free of charge to primary school students, and the Government allocation for teaching materials is sufficient to cover the minimum needs of textbooks and school supplies to all pupils. This is the result of a deliberate policy by the government as can be seen from the bottom line of Table 4: during the last ten years, the percentage of the government's primary education budget spent on education materials has increased from 5.4 % to 12.6%. Despite this considerable effort, many children have no book. On average only 35% of the children have a reader, and other kinds of schoolbooks are even rarer. In the countryside, often 10 children have to share a single book. Similarly, teachers have few instructional manuals. School supplies on the other hand are generally available: 85% of primary school pupils have exercise books and pencils.
28. School supplies are generally purchased in bulk and distributed in kind to schools by District Education Officers using the allocations sent to them for this purpose by the MOE.
29. Textbooks raise more complex problems. In Ruritania their writing, publication and distribution are undertaken entirely by Government. The writing of primary education textbooks is the responsibility of the National Institute of Education (NIE) textbook committees, who entrust the task to selected DPE staff under their supervision. Printing is done by the Government Press under contracts with the NIE. The Government Press is working much below its capacity due to worn out equipment and poor management.
30. Storage and distribution are handled by People's Bookstores, an agency created by the MOE to supply schools. They run a network of 400 bookstores-warehouses staffed with people seconded from the MOE and retired schoolteachers. People's Bookstores is not really equipped to distribute textbooks to all primary school children, and its staff does not have much experience in this field. There are rumours that many of the books never reach the schools but end up in the private market.
31. In addition to their scarcity, the present primary education textbooks are of poor quality: written ten years ago, they are not adapted to the present

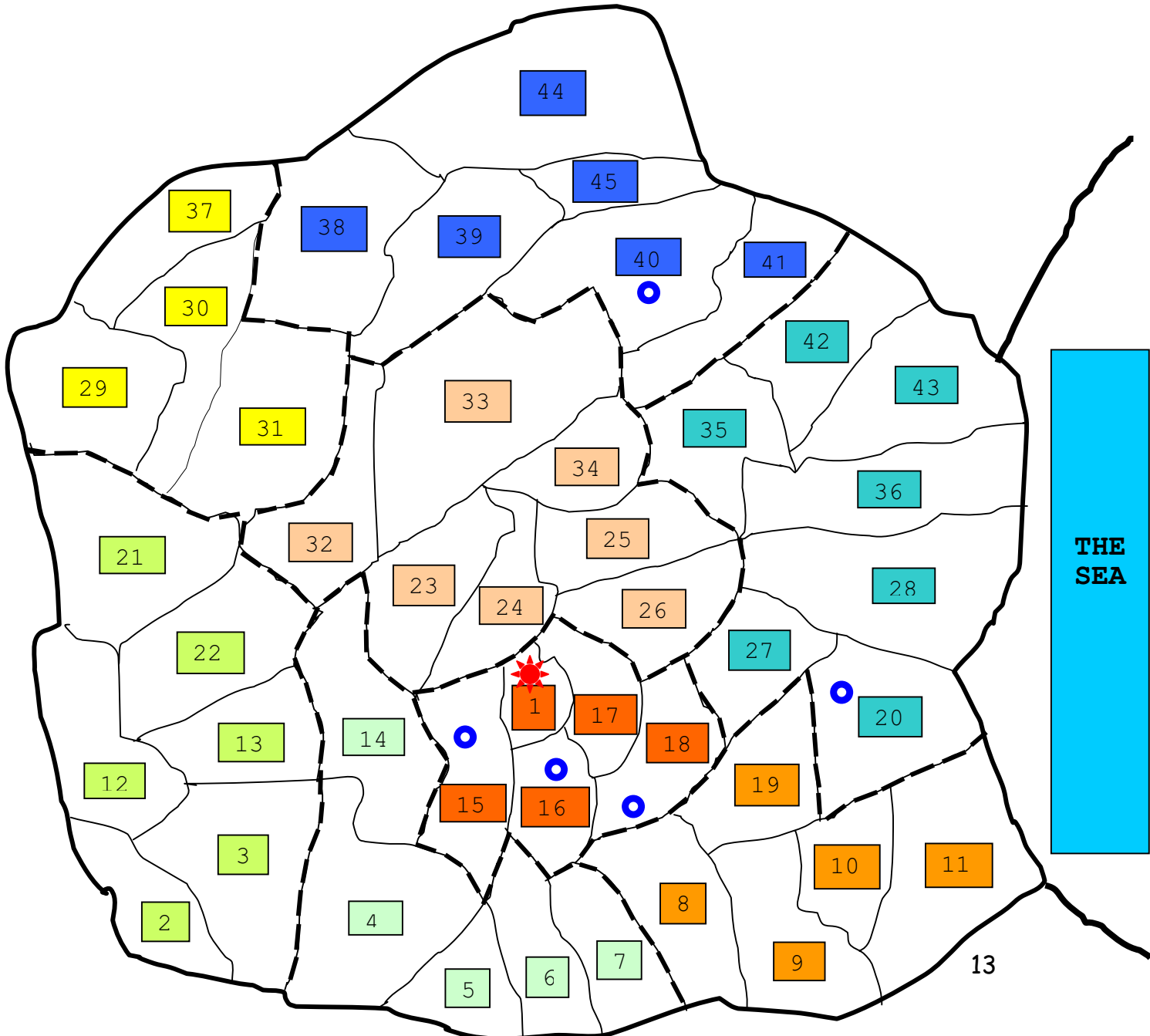
curricula, the teaching methods they use are outdated, and their physical quality (legibility, durability of paper and cover) is also poor. Schoolbooks are also relatively expensive in Ruritania. The average cost charged by the Government Press for primary education textbooks is \$2.4 per copy. An expert's report argued that the cost of books could be slashed by 50 percent if they were ordered in large batches through competitive bidding procedures.

### *School buildings and furniture*

32. Schools are located in buildings not conducive to study. 36 per cent of primary school classrooms are in temporary shelters, and many of those that were built by rural communities are in a woeful state of disrepair. 30% of children have no desk to work on, and 54% of classes have no table and chair for the teacher. By far, the largest contribution to the maintenance and construction of primary school buildings is, in fact, provided by the PTAs (see para 11).

## APPENDIX MAP OF RURITANIA

- |   |   |
|---|---|
| <p>  International boundaries<br/>  District boundaries         </p> <p>  National capital ( population 500,000)<br/>  Major cities (population around 100,000 each)         </p> <p>  Northwest and Southwest Regions: mountain areas<br/>  Northwest and Southwest Regions: mountain areas<br/>  Central Region: densely populated peri-urban areas<br/>             Other Regions are shown by different colours         </p> | <p>  Region-boundaries<br/>             1, 2, 3,... District numbers         </p> |
|---|---|



**APPENDIX 1.**  
**SAMPLE QUESTIONNAIRE**

**PUBLIC EXPENDITURE TRACKING**  
**SURVEY**

**PRIMARY SCHOOL SURVEY**

International Institute for Educational Planning

World Bank

### Section I. Identification

<i>Question</i>		<i>Unit</i>	<i>Value</i>
1. Sample code		Code	
2. Name of school		name	
3. Province		name	
4. District		name	
5. Day or boarding		1=Day, 2=Boarding 3=Mixed	
6. Private, public, religious		1=Public (Government) 2=Private 3=Religious, 4=Community 5=Other	
7. How long is the school day?	a. for grades 1-3	Number of hours	
	b. for grades 4-5		
	c. for grades 6-7		
8. Boys or girls		1=Boys, 2=Girls, 3=Mixed	
9. Date of interview		day, month, year (dd,mm,yyyy)	
10. Starting time of interview		(e.g., 14.00)	
11. Telephone Number		Telephone number 0=No phone	

## Section II: Number of students in the school

(to be obtained from the school records)

<i>Question</i>	<i>Unit</i>	<i>Value</i>		
At this school, what is, or was, the number of...		...at the start of 2003?	...at the end of 2003?	...at the start of 2004?
1a. ...students in grade 1...	no. students			
1b. Of these, how many were girls?	no. students			
2a. ...students in grade 2...	no. students			
2b. Of these, how many were girls?	no. students			
3a. ...students in grade 3...	no. students			
3b. Of these, how many were girls?	no. students			
4a. ...students in grade 4...	no. students			
4b. Of these, how many were girls?	no. students			
5a. ...students in grade 5...	no. students			
5b. Of these, how many were girls?	no. students			
6a. ...students in grade 6...	no. students			
6b. Of these, how many were girls?	no. students			
7a. ...students in grade 7...	no. students			
7b. Of these, how many were girls?	no. students			
8. ...total students in class today...	no. students			
9a. Total number of students participating in primary leaving exam in 2003	no. students			
9b. Of these, how many were girls?	no. students			
10a. How many students received a passing mark on the primary leaving exam in 2003?	no. students			
10b. Of these, how many were girls?	no. students			



### Section III: Personal information about head teacher

(to be obtained from the school records)

<i>Question</i>	<i>Unit</i>	<i>Value</i>
1. Name		
2. Gender	1=Male 2=Female	
3. Age	Years	
4. Are you the head teacher?	1=Yes 2=No	
5. If not, what is your position?	1= Deputy Head Teacher 2= Teacher 3= Other	
If respondent is not head teacher, fill in questions 6-9 <i>about the head teacher</i> , or leave them blank if the information is not known for certain.		
6. Number of years teaching	Years	
7. Number of years as head teacher	Years	
8. Number of years as a head teacher at this school?	Years	
9. Highest level of education completed?	1 = high school 2 = 1-yr teacher diploma 3 = 2-yr teacher diploma 4 = some university 5 = university degree 6 = post-graduate work	

### Section IV: Teachers

(to be obtained in consultation with the head teacher with access to school records)

Question	Unit	Value
1. How many teaching positions are officially allocated to this school?	Number	
2. How many of the official positions are actually filled?	Number	
3. How many teachers are present and teaching in this school <i>today</i> ?	Number present	
4a. Have any teachers been fired or laid off in the past twelve months? How many?	Number fired	
4b-d. For each of the teachers most recently fired (up to three, from the past twelve months as stated in 4a), what was the reason for firing the teacher?	4b	1= Absenteeism
	4c	2= Abuse of children 3= Bad teaching 4= Services no longer needed / redundant
	4d	5= Conflicts with staff 6= Other

5. Please fill out the table below for all the school's teachers.

	5a#	5b#	5c#	5d#	5e#	5f#	5g#	5h#	5i#
I D	Name	What grade does he/she teach?	Gender	Age	Position	Years employed at this school	In-depth interview	At school today?	If no, why is the teacher away?
		Grade	1=M 2=F	Yrs	1= Senior teacher 2= Teacher 3= Trainee 4=Other	Years	1=Yes Others blank.	1=Y 2=N	1=Sick 2=Training 3=Administrative duties 4=Approved leave 5=Don't know 6=Other
1	(Head teacher)								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Continuation of Question 4 if necessary

	5a#	5b#	5c#	5d#	5e#	5f#	5g#	5h#	5i#
I D	Name	What grade does he/she teach?	Gender	Age	Position	Years employed at this school	In-depth interview	At school today?	If no, why is the teacher away?
		Grade	1=M 2=F	Years	1= Senior teacher 2= Teacher 3= Trainee 4=Other	Years	1=Yes Others blank.	1=Yes 2=No	1=Sick 2=Training 3=Administrative duties 4=Approved leave 5=Don't know 6=Other
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

From the teacher list above, select *two* teachers if your school has *less than ten teachers* altogether, *three* teachers if your school has *between ten and twenty* teachers, and *four* teachers if your school has *more than twenty* teachers. We want to select teachers randomly but also to get a sample that covers different grade levels. Start with the teachers that appear *last* in an alphabetical list. Select the number specified by the size of your school, but do not select two teachers that fall into the same column in the table below. For example, if the last two teachers in the alphabet teach in grades 5 and 6, drop the second one and select the next teacher. Thus in large schools, all four columns will be filled in, but in smaller schools one or two at random will be left blank.

**IF THE DESIGNATED TEACHER IS NOT PRESENT, PLEASE DO NOT SELECT ANOTHER TEACHER INSTEAD.** This interferes with the study's techniques of statistical randomization.

			a	b	c	d
		Units	Grade 1 or 2 teacher	Grade 3 or 4 teacher	Grade 5 or 6 teacher	Grade 7 teacher
6. Born in this province?		1= Yes 2= No				
7. Born in this district?		1= Yes 2= No				
8. What is the highest level of education completed by each of these teachers?		1= Less than high school 2=High school diploma 3= Some college 4= College degree 5= Beyond college				
9. Is this teacher present today?		1= Yes 2= No				
If no:	10. How long has the teacher been away?	Number of days				
	11. Why is the teacher away?	1= Sick 2= Training 3= Administrative duties 3= Approved leave 4= Don't know 5= Other				
	12. How is the school covering classes?	1= Use relief teacher 2= Combine classes 3= Set the students unsupervised work 4= Set the students work and visit now and then 5= Let them play sports 6=Send students home				
13. How many days has this teacher been absent this year?		Number of days				
14a. How much does the teacher receive in salary each month?		Currency figure				

14b. How much does the teacher receive in allowance each month?	Currency figure				
14c. How much is deducted from each payslip automatically?	Currency figure				
14d. So the total amount is [add 14a and 14b, then subtract 14c]	Currency figure				
15. How is the teacher paid?	1= Check 2= Direct deposit 3= Cash				
16. Who pays the teacher's salary?	1= Natl. govt. 2= School 3= Community 4= Other				
17. Who pays the teacher's allowance?	1= Natl. govt. 2= School 3= Community 4= Other				
18. Prices and wages vary considerably across different parts of this country? What is a typical hourly wage for a manual laborer in this area?	Currency figure				
19. Do you think it is possible to support a family only on the salary that this teacher earns?	1=Yes 2=No				
20. Does the teacher live in school-provided housing?	1= Yes 2= No				
If yes 21. What is the rental value of the house per month?	Currency per month				
22. In your estimate, how many hours per week does this teacher work <i>at this school?</i>	Number of hours				
23. How many hours per week is this teacher supposed to work <i>in the classroom?</i>	Number of hours				
24. Does this teacher have another job outside of school?	1= Yes 2= No				

## Section V: Facilities

(to be obtained in consultation with the head teacher)

<i>Question</i>		<i>Unit</i>	<i>Value</i>
1. How many classrooms made of high-quality materials are there in this school?		Number	
2. How many classrooms made of low-quality materials are there in this school?		Number	
3. How many classrooms have a blackboard?		Number	
4. How many classrooms have a roof that leaks when it rains?		Number	
5. How many classrooms have a chair <i>and</i> a table for the teacher?		Number	
6. How many classrooms have storage space that can be locked at night?		Number	
7. Does this school have a library?		1=Yes 2=No	
If yes	8. Estimate the number of books.	Number	
9. Who owns the land used by the school?		1=Customary 2=State 3=Church 4=Board of Management member 5=School 6=Other	
<b>Utilities</b>			
10. Are there enough working toilets for the students to use?		Number	
11. Are there separate toilet facilities for girls?		Number	
12. How many of the classrooms in this school have electricity?		Number	
13. How many days last month did you experience some kind of power shortage?		1= None 2= One 3= Two to eight 4= About half the time 5= Most of the time 6= No power at all	
14. What is the main source of drinking water at this school?		0=None 1=Rain water tank 2=Spring / lake / river 3=Well / Bore hole 4=Piped 5=Other	
15. Are the students able to drink water from that source today?		1=Yes 2=No	

16. Was water available all year round from that source in 2002?	1=Yes 2=No	
17. Does the school have a playground or a sports area?	1=Yes 2=No	
18. Is the school surrounded by a wall or fence?	1=Yes 2=No	
19. Does the school have a specialist science classroom?	1=Yes 2=No	
20. Does the school have a kitchen or a cafeteria?	1=Yes 2=No	
21. How do the students each lunch? (NOTE: If the answer differs by grade level, answer for students in grade 5.)	1= Free school lunch provided at cafeteria 2= Students may pay for school lunch or bring their own 3= Students bring their own lunch and eat at school 4= Students are sent home for lunch and then come back 5= School day ends before lunch time 6= Other	
22. Does the school have a staff-room?	1=Yes 2=No	
23. Does the school receive a newspaper?	1=Yes 2=No	

## Section VI. Location, Distance and School Choice

(to be obtained in consultation with the head teacher)

<i>Question</i>	<i>Unit</i>	<i>Value</i>	
1. Is this school located in an urban or a rural area?	1=Urban 2=Rural		
2. What is the population of the village or town in which this school is located?	1=Not in village or town / Less than 100 2=Between 100 and 500 3=Between 500 and 2,000 4=Between 2,000 and 5,000 5=Between 5,000 and 20,000 6=More than 20,000		
3. What other villages or towns do students at this school come from? (List up to three, ranked according to which send the largest number of students to this school.)	Town name	a.	
		b.	
		c.	
4. About how many students come from each of the villages listed in question 3?	Number	a.	
		b.	
		c.	
5. How far away is each of the villages listed in question 3?	Kilometers	a.	
		b.	
		c.	
6. How would you get to each of the villages listed in question 3?	1=Walk 2=Bus 3=Train 4=Car 5=Animal 6=Other	a.	
		b.	
		c.	
7. Using the mode of transportation chosen in question 6, about how long would it take to get to each of the villages listed in question 3 from this school?	Hours and minutes	a.	
		b.	
		c.	
How far from this school is the nearest of each of the following:	8. high school or secondary school	Kilometers	
	9. public transport	Kilometers	
	10. health post / clinic	Kilometers	
	11. public transport	Kilometers	
	12. paved road	Kilometers	
	13. bank	Kilometers	



13. Are there any schools that local children could go to instead of this one?		1=Yes 2=No 99=Don't know	
If yes	14. Please list the nearest ones (up to three)	School name	a. b. c.
	15. What kind of school is each of these three schools, day or boarding?	1=Day 2=Boarding 3=Mixed	a. b. c.
	16. What kind of school is each of these three schools, private, public, or religious?	1=Public (Government) 2=Community 3=Private 4=Religious 5=Other	a. b. c.
	17. How far away is each of these three schools?	Kilometers	a. b. c.
	18. What are the main reasons that parents or children choose this school?	1=Proximity 2=Academic reputation 3=Ethnicity or religion 4=Cost 5=Other (specify)	

## Section VII. Organization and Governance

(to be obtained in consultation with the head teacher)

<i>Question</i>	<i>Unit</i>	<i>Value</i>		
1. Does the school have a Board of Management (BOM)?	1=Yes 2=No			
If yes	2. How many times did the BOM meet in 2002?	Number of meetings		
	3. How many times had the BOM met in 2003?	Number of meetings		
	4. When was the last BOM meeting?	Day, month, year (dd,mm,yyyy)		
	5. How many people are on the BOM?	Number		
	6. Which of these are represented on the BOM?	a. Teachers	1=Represented 2=Not represented	a.
		b. Other staff		b.
c. District representative		c.		
d. Parent representative		d.		
e. Churches / NGOs		e.		
f. Local politicians		f.		
7. What were the top two issues discussed at the <i>most recent</i> BOM meeting?	1=Discipline 2=Finance issues 3=Fees 4=School budget 5=Staff issues 6=Curriculum matters 7=Fundraising 8=Projects 9=Maintenance 10=Other	# 1	Issues	
		# 2	Issues	
8. Does the school have a Parent Teacher Association (PTA)?	1=Yes 2=No			
If yes	9. How many times did the PTA meet in 2002?	Number of meetings		
	10. How many times has the PTA met in 2003	Number of meetings		
	11. When was the last PTA meeting?	Day, month, year (dd,mm,yyyy)		

	12. What percentage of the parents attend?	0=Very few 1=Less than half 2=About half 3=More than half 4=About all	
--	--	---	--

**School decision making**

Who has the most say in:

13. Approving the budget	1=Head Teacher 2=Other Teacher 3=Other Staff 4=DEO or PEO 5=BOM 6=PTA 7=Local politician 8=Community 9=Other	
14. Designing the curriculum		
15. Setting the level of fees at this school		
16. Choosing the teachers to hire		
17. Assessing teachers		
18. Deciding on maintenance work at this school		

## Section VIII. Supervision and Accountability

(to be obtained in consultation with the head teacher with access to the school records if necessary)

<i>Question</i>		<i>Unit</i>	<i>Value</i>
1. How many visits were made to this school by outside officials?	a. 2002	Number of visits	a.
	b. 2003		b.
	c. 2004		c.
2. What outside officials made visits to this school?	<b>MULTIPLE ANSWERS ALLOWED</b>		
	a. 2002	1=District educational officer 2=Provincial educational officer 3=Representative of national education inspectorate 4=Other	a.
	b. 2003		b.
c. 2004	c.		
Consider only visits by the representative of the inspectorate:			
3. How many times did the inspector visit in:	a. 2002?	Number of times	a.
	b. 2003?		b.
	c. 2004?		c.
4. What was the purpose of the inspector's last visit?		1=Personal inspection 2=Advisory visit 3=Compulsory inspection 4=Other	
5. At that time, did the inspector:	a. Meet with the head teacher?	1=Yes 2=No	a.
	b. Meet with teachers?		b.
	c. Meet with the BOM?		c.
	d. Meet with parents, the PTA or the community?		d.
	e. Observe classes?		e.
	f. Check school records?		f.
6. What kind of feedback was given at the end of that visit?	4a	0=None 1=Verbal report at staff meeting 2=Verbal report to head teacher only 3=Verbal reports to individual teachers 4=Written report for head teacher 5=Written reports to individual teachers	a.
	4b		b.
	4c		c.
7. Did you get any feedback in writing that was sent to the school at a later time?		1=Yes 2=No	
If yes	8. How long did it take to receive the written report?	Number of weeks after visit	

## DATA SHEET

(to be completed in consultation with head teacher and school records)

### Section IX. School's Sources of Funding

Source	Were funds received from this source?		How much was the school <i>entitled</i> to from this source		How much did the school <i>actually receive</i> from this source		g. On what schedule were the funds from this source disbursed?	h. How much delay was there in receipt of these funds?	i. What procedure did the school go through to get this kind of funds?	j. Did this funding come ear-marked for certain categories of spending?	k. If so, what category or categories of spending was this source of funding intended for? (multiple answers permitted)
	a. (1) in 2003	b. (2) in 2004	c. (1) in 2003	d. (2) in 2004	e. (1) in 2003	f. (2) in 2004					
	1=Y 2=N	1=Y 2=N	Curren-cy figure	Curren-cy figure	Currency figure	Currency figure	1=All at once 2=Two or more tranches 3=Monthly 4=More often than monthly	1=None / On time 2=Less than two weeks 3=Between two weeks and two months 4=More than two months	1=Automatic (sent by mail or direct deposit) 2=School responsible for pick-up 3=Significant paperwork burden	1=Yes 2=No	1=Paying staff 2=Scholastic materials 3=Maintenance 4=Administration 5=Special programs 6=Construction or expansion of facilities 7=Other
1. National govt. capitation grants											
2. Other national govt. programs											
3. Local govt. support											
4. PTA Fees											

Source	Were funds received from this source?		How much was the school <i>entitled to</i> from this source		How much did the school <i>actually receive</i> from this source		g On what schedule were the funds from this source disbursed?	h. How much delay was there in receipt of these funds?	i. What procedure did the school go through to get this kind of funds?	j. Did this come earmarked for certain categories of spending?	k. If so, what category or categories of spending was this source of funding intended for? (multiple answers permitted)
	a. (1) in 2003 1=Y 2=N	b. (2) in 2004 1=Y 2=N	c. (1) in 2003 Currency figure	d. (2) in 2004 Currency figure	Currency figure	Currency figure					
5. Other fees								1=Automatic (sent by mail or direct deposit) 2=School responsible for pick-up 3=Significant paperwork burden	1=Yes 2=No	1=None / On time 2=Less than 2 weeks 3=Between 2 weeks and 2 months 4=More than 2 months	1=Paying staff 2=Scholastic materials 3=Maintenance 4=Administration 5=Special programs 6=Construction or expansion of facilities 7=Other
6. Churches / NGOs / donors											
7. Fundraising											
8. Other sources											

**Section X. What did the school spend its money on?**

	In 2003				In 2004			
	a. How much was spent <i>in the school budget</i> on the item on the left? Currency figure	b. Was money spent on this item that was not included in the budget? 1= Yes 2=No	c. If so, how much? Currency figure	d. Did school receive any of this item <i>in kind</i> from outside sources? 1= Yes 2= No	e. How much was spent <i>in the school budget</i> on the item on the left? Currency figure	f. Was money spent on this item that was not included in the budget? 1= Yes 2=No	g. If so, how much? Currency figure	h. Did school receive any of this item <i>in kind</i> from outside sources? 1= Yes 2= No
1. Administrative costs								
Facilities-related expenses								
2. rent on property								
3. maintenance of school building								
4. janitorial staff								
5. security staff								
6. utilities								
7. scholastic materials (textbooks, pens, etc.)								
Staff-related expenses								
8. teachers' salaries								
9. teachers' bonuses								
10. teacher training								

## Section XI

### Data sheet to calculate the value of in-kind support

#### From Central Government

<i>Subject</i>	<i>Number</i>
1. Textbooks	
a. English	
b. Science	
c. Social studies	
d. Mathematics	
2. Stationary	
a. Pens	
b. Chalk	
c. Notebooks	
d. Uniforms	
e. Other	

#### From Local Government

<i>Subject</i>	<i>Number</i>
3. Textbooks	
a. English	
b. Science	
c. Social studies	
d. Mathematics	
4. Stationary	
a. Pens	
b. Chalk	
c. Notebooks	
d. Uniforms	
e. Other	



**Section XII. Quality of records** (To be completed after the rest of the interview has been conducted.)

<i>Question</i>	<i>Unit</i>	<i>Value</i>
1. Does the school keep detailed records of receipts from its spending?	1=Yes 2=No	
If yes   2. Are these available for both 2003 and 2004?	1=Yes 2=No	
3. Does the school keep records of its receipts of income and subsidies from other sources?	1=Yes 2=No	
If yes   4. Are these available for both 2003 and 2004?	1=Yes 2=No	
5a. Did the records kept at this school enable you to answer the questions in Section IX confidently and accurately?	1=Completely confidently and accurately 2=Figures may be approximate, but generally I am quite confident	
6a. Did the records kept at this school enable you to answer the questions in Section X confidently and accurately?	3=There may be some holes in the records which compromise the figures' accuracy 4=Not confident of the accuracy of figures: specify problems with providing the requested data in part b of this question (in the space below)	
7a. Did the records kept at this school enable you to answer the questions in Section XI confidently and accurately?		
5b. If you answered "4" to question 5a, specify problems with records:		
6b. If you answered "4" to question 6a, specify problems with records:		
7b. If you answered "4" to question 7a, specify problems with records:		

## Notes

*About adapting the survey to your country: This sample questionnaire is designed to be rather abstract and general. Some of the specifics have been drawn from particular country experiences. In other cases, it used an abstract, general formulation of a question at the expense, perhaps of clarity. It is important that the questions be as clear as possible to respondents. Substitute local terminology as much as possible, to dispel any difficulty or ambiguity of interpretation that the questions as asked here may have in your country's context. The notes below give suggestions of specific ways in which the survey might be adapted to your country. They are not necessarily exhaustive.*

I. (1) Sample codes for each school should be created centrally at the time the school sample is being prepared. They help analysts organize the data.

(6) The “types” of schools listed here draw from the experience of PETS in Uganda and Papua New Guinea. What are the main types of schools in your country? Adapt the answer choices so that they capture the major, clear distinctions in school types.

II. (8) and (15) Schools in your country may not include grades 1-7. This section should be adapted, so that the grade levels it asks about correspond to those represented in primary schools (or secondary schools if that is the PETS's focus).

(16) Questions like this one are best answered while the school day is going on, so that students can be counted.

(17) We assume here that there is a more or less standardized practice of offering a leaving exam at the end of grade 7. The general goal is to measure a “graduation rate” from primary school. In your country, leaving exams may not exist, or they may be highly standardized in which case it would be useful to get more detailed results in order to compare academic achievement across the country. There may be other tests that are worth asking about. Adapt the questionnaire to your own circumstances.

III. (6)-(8) These measure the head teacher's experience level. If there are other useful local ways to ascertain the head teacher's quality, adapt the questionnaire accordingly.

(9) Vocational and higher education differs markedly across countries. Adapt the answer choices so that they will make sense to respondents in your country.

IV. (1) and (2) These questions assume that the central government allocates a certain number of “posts” to schools, which may or may not correspond at any given time to actual teachers teaching and getting paid. This system exists in many developing countries. If it exists in your country, there may be a way to use local terminology and make the question clearer. If it does not exist, these questions may not make sense, and information about the number of teachers will have to be requested in a different way.

(3) and (4) Can teachers be fired? What for? A key part of an accountability system.

(5) This is one of the most elaborately structured questions in the questionnaire as presented here. The answer to a single question within section IV consists of an entire matrix. We use this here to lead into our selection of two to four teachers for a more in-depth analysis in questions 6-23.

(6) The process of selecting teachers offered here is rather complex and could be simplified. The advantage it offers is that analysts will be able to sort teachers by grade level, while it does not impose too large a burden on smaller schools participating in the survey. It also generates a natural “weighting” scheme, with larger schools more heavily represented, but this weighting scheme is a rough one and may not be adequate for many purposes.

V. Picture the buildings and grounds of a typical school in your country. What features would you expect to see? What features might vary? What would be the marks of a prosperous school? Of a disadvantaged school? Adapt the questionnaire accordingly.

(1) and (2) “High-quality materials” and “low-quality materials” are stand-ins for local materials: for example, “concrete” may be a high-quality material in your country context, and “bush material” a low-quality material. It is necessary to substitute specific physical materials here because the present categories are subjective.

VI. (3)-(5) If you want to investigate the effects of school location more thoroughly, you might create village and town ID numbers, which would then help analysts explore the effect of distance and possibly of school choice more thoroughly.

Sections VII-XII: Issues of school governance and patterns of funding differ enough among countries that the sample questionnaire can only give general guidelines. This part of the question will require especially thorough and thoughtful adaptation.

VII. (13)-(18) These questions make an effort to get a clear picture of the decision-making process within your school. However, in current form they remain somewhat “subjective.” You can do better for your own country by coming to the process of questionnaire design with some knowledge of local procedures and practices. School governance is at the heart of issues of accountability, and go far to determine how many opportunities for corruption there are, and who gets them, so this question should be designed carefully to make sure the data generated are reliable and forceful.

IX. After collecting the number of each of the items listed here, the price of these goods at the national level should be found out. The number of books purchased should be multiplied by the price to get a figure for the value of books purchased.

**Bastille**

**Note: All locations and codes do not correspond to any actual schools to preserve confidentiality!**

**Questionnaire for District Educational Officer(II)  
Expenditure and Service Delivery Survey  
ZAMBIA: Educational Sector  
The World Bank**

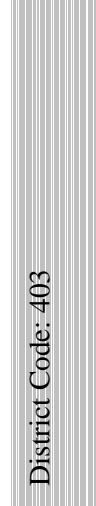
		Put in the names here	Put comments here
1	Name of supervisor		
2	Name of enumerator		
3	Location: Province		
4	Location: District		
5	Interview Date		
6	Interview Time		
7	Name of Respondent		
8	Respondent's job		1=DEO 2=Building Officer 3=Accounts Officer 4=Other Officer 5=Other
9	If the respondent is not the DEO, please record why the DEO is not available		1=DEO is sick 2=Family Member is Sick 3=DEO is on Leave 4=DEO gone on official work 5=Other

**Section I: Characteristics of Office and District**

Question Number	Question	Please record your answer here	Codes/Instructions
1	How many schools are there in this district?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Number of Schools	Please fill in the number of schools in your district
2	How long does it take to reach the closest school to this office?	<input type="text"/> <input type="text"/> Hours <input type="text"/> <input type="text"/> Minutes	Please record the time for the usual way in which you travel
3	How long does it take to reach the furthest school to this office?	<input type="text"/> <input type="text"/> Hours <input type="text"/> <input type="text"/> Minutes	Please record the time for the usual way in which you travel
4	How long does it take to reach the average school to this office?	<input type="text"/> <input type="text"/> Hours <input type="text"/> <input type="text"/> Minutes	Please record the time for the usual way in which you travel
5	How many staff members does this office have?	<input type="text"/> <input type="text"/>	
6	Is this the same as the number of staff assigned to this office?	<input type="text"/>	1=Yes 2=No
7	How many members of staff reported for duty today?	<input type="text"/> <input type="text"/>	
8	Does this office have an accounting unit?	<input type="text"/>	1=Yes 2=No
9	Does this office have a working telephone?	<input type="text"/>	1=Yes 2=No
10	What is the drinking water source?	<input type="text"/>	1=Piped Water 2=Bore-hole 3=Tank/Pond/River/Stream 4=Other
11	Does this office have electricity?	<input type="text"/>	1=Yes 2=No
12	How many cars does this office have at present?	<input type="text"/> <input type="text"/>	

For Q 2,3 and 4 please record the time taken for the usual which in which the DEO travels (by car, by taxi etc.).

Some of the questions relate to the stock of transport vehicles at present, in August 2001, and in August 2000. Please keep in mind that these dates change across different questions.



Question Number	Question	Please record your answer here	Codes/Instructions
13	How many of these cars are in working condition <i>today</i> ?	<input type="text"/> <input type="text"/>	Please record the number of cars that can be driven today
14	How many motorcycles does this office have at <i>present</i> ?	<input type="text"/> <input type="text"/>	
15	How many of these motorcycles are in working condition <i>today</i> ?	<input type="text"/> <input type="text"/>	Please record the number of motorcycles that can be driven today
14	How many cars did this office have in August 2001?	<input type="text"/> <input type="text"/>	
15	How many motorcycles did this office have in August 2001?	<input type="text"/> <input type="text"/>	
16	How many cars did this office have in August 2000?	<input type="text"/> <input type="text"/>	
17	How many motorcycles did this office have in August 2000?	<input type="text"/> <input type="text"/>	
18	Is availability of fuel a problem at <i>present</i> ?	<input type="text"/>	1=Yes 2=No
19	Was availability of fuel a problem in August 2001?	<input type="text"/>	1=Yes 2=No
20	Was availability of fuel a problem in August 2000?	<input type="text"/>	1=Yes 2=No

For Q 2,3 and 4 please record the time taken for the *usual* which in which the DEO travels (by car, by taxi etc.).

Some of the questions relate to the stock of transport vehicles at *present*, in August 2001, and in August 2000. Please keep in mind that these dates change across different questions.

**Section II: School Visits**

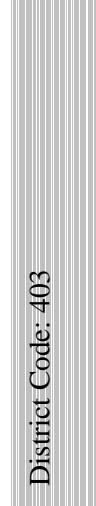
School Number	School Code Put in codes of schools that have sampled in this district over here	How many times has someone from this office visited the school since <b>January 2002?</b> 1=No visits 2=One visit 3=Two Visits 4=Three Visits 5=More than three visits	Which officer last visited _____ school? 1=DEO 2=Standards Officer 3=Buildings Officer 4=Sports Coordinator 5=Examination Officer 6=Chief Education Officer 7=Other	How many visits by standards officers have been made to _____ school since <b>January 2002?</b> Please record the <i>number</i> of visits	When did the DEO last visit this school? ____/____/____ Month/Year	When was the last time the DEO met the PTA executive of _____ school? ____/____/____ Month/Year	What was the main topic of discussion? 1=School Funds 2=School Performance 3=School Infrastructure 4=Teacher Performance 5=Teacher's Housing 6=Teacher Shortages 7=Cannot Remember 8=Other
1	1234	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
2	6543	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
3	1344	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
4	65443	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
5	5655	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
6	3433	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>
7	123334	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> ____/____/____ Month/Year	<input type="text"/> ____/____/____ Month/Year	<input type="text"/>	<input type="text"/>



**Section IIb: Requests and Complaints**

School Number	School Code Put in codes of schools that have sampled in this district over here	Have you received any complaints from the head-teacher of _____ school since January 2002? 1 = Yes 2 = No	Have you received any requests from the head-teacher of _____ school since January 2002? 1 = Yes 2 = No	Have you received any complaints from the PTA of _____ school since January 2002? 1 = Yes 2 = No	Have you received any complaints from the teachers of _____ school since January 2002? 1 = Yes 2 = No	In this office's opinion are there a large number of school age children who are not going to school in the villages/ Neighborhoods around school _____? 1 = Yes 2 = No	Does any officer of this office have any children or relatives in _____ school? 1 = Yes 2 = No
1	1234	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>
2	6543	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>
3	1344	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>
4	65443	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>
5	5655	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>
6	3433	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____/_____ Month/Year	<input type="checkbox"/>	<input type="checkbox"/>

<p><b>School Number</b></p>	<p><b>School Code</b> Put in codes of schools that have sampled in this district over here</p>	<p>Have you received any complaints from the head-teacher of _____ school since <b>January 2002?</b> 1 = Yes 2 = No</p>	<p>Have you received any requests from the head-teacher of _____ school since <b>January 2002?</b> 1 = Yes 2 = No</p>	<p>Have you received any complaints from the PTA of _____ school since <b>January 2002?</b> 1 = Yes 2 = No</p>	<p>Have you received any complaints from the teachers of _____ school since <b>January 2002?</b> 1 = Yes 2 = No</p>	<p>In this office's opinion are there a large number of school age children who are not going to school in the villages/ Neighborhoods around school _____? 1 = Yes 2 = No</p>	<p>Does any officer of this office have any children or relatives in _____ school? 1 = Yes 2 = No</p>
<p>7</p>	<p>123334</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/> <input type="checkbox"/></p>	<p>_____/_____ Month/Year</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>



**Section III: Meetings with PEO/Ministry**

Question Number			
1	How many meetings did you have with the PEO since <b>January 2002</b> ?	<input type="text"/>	
2	When was the last time you had a meeting with the PEO	_____/_____ Month/Year	
3	What was the reason for this meeting?	<input type="text"/>	1=Discuss national policy 2=Educational Event 3=Collect district allocation 4=Other
4	Have you sent any complaints/requests to the PEO's office since <b>January 2002</b> ?	<input type="text"/>	1=Yes 2=No
5	How many meetings did you have at the ministry since <b>January 2002</b> ?	<input type="text"/>	
6	When was the last time you had a meeting at the ministry?	_____/_____ Month/Year	
7	What was the reason for this meeting?	<input type="text"/>	1=Discuss national policy 2=Educational Event 3=Collect district allocation 4=Other
8	Have you sent any complaints/requests to the ministry since <b>January 2002</b> ?	<input type="text"/>	1=Yes 2=No

**Section IV: Funding:**

Please specify the funding that this office received from each of the sources mentioned below in each of the months.

Question Number	Month and Year	BESSIP	GRZ	HIPC	PAGE	Other Donors	Other
1	June 2001	K_____	K_____	K_____	K_____	K_____	K_____
2	July 2001	K_____	K_____	K_____	K_____	K_____	K_____
3	August 2001	K_____	K_____	K_____	K_____	K_____	K_____
4	September 2001	K_____	K_____	K_____	K_____	K_____	K_____
5	October 2001	K_____	K_____	K_____	K_____	K_____	K_____
6	November 2001	K_____	K_____	K_____	K_____	K_____	K_____
7	December 2001	K_____	K_____	K_____	K_____	K_____	K_____
8	January 2002	K_____	K_____	K_____	K_____	K_____	K_____
9	February 2002	K_____	K_____	K_____	K_____	K_____	K_____
10	March 2002	K_____	K_____	K_____	K_____	K_____	K_____
11	April 2002	K_____	K_____	K_____	K_____	K_____	K_____
12	May 2002	K_____	K_____	K_____	K_____	K_____	K_____
13	Annual Expenditure	K_____	K_____	K_____	K_____	K_____	K_____

Please enter the amount your office has received from each of the sources heading the columns from June 2001 to May 2002. In this question we are referring to cash/cheques received from these sources.

District Code: 403

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**Section V: Expenditures in the last month**

Question Number	Question	BESSIP	GRZ	HIPC	PAGE	Other
1	In <b>May 2002</b> , how much was spent on transport (including fuel)?	K_____	K_____	K_____	K_____	K_____
2	In <b>May 2002</b> , how much was spent on vehicle maintenance?	K_____	K_____	K_____	K_____	K_____
3	In <b>May 2002</b> , how much was spent on office expenditure?	K_____	K_____	K_____	K_____	K_____
4	In <b>May 2002</b> , how much was spent on disbursements to schools?	K_____	K_____	K_____	K_____	K_____
5	In <b>May 2002</b> , how much was spent on emergencies?	K_____	K_____	K_____	K_____	K_____
6	In <b>May 2002</b> , how much was spent on telephone and electricity bills?	K_____	K_____	K_____	K_____	K_____
7	In <b>May 2002</b> , how much was spent on other items (specify)?	K_____	K_____	K_____	K_____	K_____

We would like to get a better sense of your annual expenditure. All information pertains to May 2002. Please tell us the amount of money spent from all the various sources (at the top of the columns) on the items mentioned in the rows.

**Section VI: Receipts by schools**

School Number	School Code Put in codes of schools that have sampled in this district over here	How much has school received in cash/cheque from this office since January 2002?	How many textbooks has school received from this office since January 2002?	How much has school received for capital expenditures (such as rehabilitation) since January 2002?	How many desks has school received from this office since January 2002?	How many cartons of chalk has school received from this office since January 2002?	Has school received special assistance from this office since January 2002? 1=Yes 2=No
1	1234	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
2	6543	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
3	1344	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
4	65443	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
5	5655	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
6	3433	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
7	123334	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	K_____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>



**School Code and Name**

Put in codes of schools that have sampled in this district over here: School names do not appear anywhere in the rest of the document to preserve confidentiality. Prior to data entry, the last sheet is torn and destroyed.

Bastille	John School	1234
Bastille	Jane School	6543
Bastille	Slutsky school	1344
Bastille	Nash School	65443
Bastille	Adam Smith school	5655
Bastille	Ricardo School	3433
Bastille	Schumpeter School	123334



**PUBLIC EXPENDITURE  
AND SERVICE DELIVERY**

**Research Assistants  
Survey Manual**

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## **Provincial Education Advisers**

**Enga, EHP, Morobe, Sandaun, ENB, WNB, Gulf, NCD**

8/4/02

### **Re: Public Expenditure and Service Delivery Study**

In Papua New Guinea, little is known about how public expenditures flow through the budget system – across levels of government – and are translated into services to be delivered at the local level. The goal of the Public Expenditure and Service Delivery (PESD) exercise is to generate new knowledge on how resources flow through the administrative and budgetary system; what the magnitudes of those resources are; and how those resources are combined with other inputs at the facility level to generate education outcomes.

Consultations between the Government of Papua New Guinea, the World Bank and AusAid have identified an analysis of Public Expenditure and Service Delivery (PESD) in the education sector as a timely and useful exercise.

The Secretary for Education has endorsed such a study, which will focus on the primary level of schooling where the main focus of PNG's effort on improving education services and which constitutes the largest part of the education budget.

The Education Studies Division of the National Research Institute has been asked to conduct the study. The Institute's team will co-ordinate 24 research assistants to collect data for the study.

In addition, a working group made up of representatives from the Departments of Finance, Treasury, National Planning and Monitoring, Education, and Church agencies has been established to advise and assist the research team from the Institute.

The research team has drawn a sample of seven Provinces and NCD to be included in the study. A total of 20 districts have been sampled from the Provinces for inclusion in the study and we would like to visit 30 community and primary schools in each District to collect data for the study.

The Table attached to this letter indicates the Provinces and districts throughout the country that are included in the sample.

You will note that your Province has been chosen for inclusion in the study. We are seeking your agreement and assistance to allow us to carry out part of the study in your Province.

The Institute would like to send research teams into the field in early April in order to complete the fieldwork by mid-May. There are a number of people that we would like the research teams to meet and to interview ranging from National and Provincial Treasury and Education staff through to district education advisers, head teachers, teachers, BOM chairpersons and parents.

It is the intention to carry out fieldwork in the Provinces during April and May. Training of the research assistants has already been completed. The final report is scheduled for July.

I would appreciate it if your Province would participate in this study and to assist the research team whilst it carries out its tasks. The results of the study will contribute to our understanding of resource flows and service delivery, as well as the relationship between resources and outcomes in the education sector, and contribute to policy development for the improvement of the quality of education in Papua New Guinea.

I look forward to your response.

Yours faithfully,

National Research Institute team leader.

<b>Provinces</b>	<b>Districts</b>
ENBP	Gazelle Kokopo Pomio
WNBP	Kandrian-Gloucester Talasea
Gulf	Kerema Kikori
Morobe	Finschaffen Tewae-Siassi Huon
Sandaun	Nuku Telefomin Aitape-Lumi
EHP	Kainantu Ungai-Bena Obura-Wonenara
Enga	Wabag Laigap-Pogera Kandep
NCD	NCD

**Head Teacher**

**Community and Primary Schools in:  
Enga, EHP, Morobe, Sandaun, ENB, WNB, Gulf, NCD**

14/4/02

**Re: Public Expenditure and Service Delivery Study**

The Education Studies Division of the National Research Institute has been asked to conduct an extensive study of public expenditure and service delivery in education in Papua New Guinea.

A team from the Institute will co-ordinate 24 research assistants to collect data for the study.

The Secretary for Education has endorsed the study, which will focus on the primary level of schooling which is the main focus of PNG's effort on improving education services and which constitutes the largest part of the education budget.

We have also contacted the Provincial Administrator and Provincial Education Adviser in your Province who have agreed that we should carry out the study.

In addition, a working group made up of senior staff from the Departments of Finance, Treasury, National Planning and Monitoring, Education, and Church agencies has been established to advise and assist the research team with the study.

The objective of the study is to track money flows from the Departments of Treasury and Finance through the National and Provincial Departments of Education to the districts and onto schools. How do expenditure flows and patterns affect the kind of services that you can offer at the district and school levels?

The research team has drawn a sample of seven Provinces and NCD to be included in the study. A total of 20 districts have been sampled from the Provinces for inclusion in the study and the team intends to visit 30 community or primary schools in each District to collect data for the study. In all there will be 220 schools involved in the research.

The Table at the bottom of this letter indicates the Provinces and districts throughout the country that are included in the sample. Other research teams are visiting those areas at the present time.

Your school has been selected in the sample for the study. Your school was drawn out of a hat. There is no other reason than that as to why your school is included in the study.

There are a number of people that we would like to meet and to interview in relation to the study. Yourself, the chairperson of the Board of Management, a grade 5 teacher and a parent of one of your students. We are also hoping to talk with the District Education Administrator in your district and staff from the local health facility.

I would appreciate it very much if you could help us with the study. We believe the study is very important and it has the backing of national and provincial government officers. The research team will explain in more detail what is required of you in relation to the study.

Yours faithfully,

National Research Institute team leader.

<b>Provinces</b>	<b>Districts</b>
ENBP	Gazelle Kokopo Pomio
WNBP	Kandrian-Gloucester Talasea
Gulf	Kerema Kikori
Morobe	Finschaffen Tewae-Siassi Huon
Sandaun	Nuku Telefomin Aitape-Lumi
EHP	Kainantu Ungai-Bena Obura-Wonenara
Enga	Wabag Laigap-Pogera Kandep
NCD	NCD

## **District Education Administrators**

**Enga, EHP, Morobe, Sandaun, ENB, WNB, Gulf, NCD**

14/4/02

### **Re: Public Expenditure and Service Delivery Study**

In Papua New Guinea, little is known about how public expenditures flow through the budget system – across levels of government – and are translated into services to be delivered at the local level. The goal of the Public Expenditure and Service Delivery (PESD) exercise is to generate new knowledge on how resources flow through the administrative and budgetary system; what the magnitudes of those resources are; and how those resources are combined with other inputs at the facility level to generate education outcomes.

Consultations between the Government of Papua New Guinea, the World Bank and AusAid have identified an analysis of Public Expenditure and Service Delivery (PESD) in the education sector as a timely and useful exercise.

The Secretary for Education has endorsed such a study, which will focus on the primary level of schooling where the main focus of PNG's effort on improving education services and which constitutes the largest part of the education budget.

The Education Studies Division of the National Research Institute has been asked to conduct the study. The Institute's team co-ordinate 24 research assistants to collect data for the study.

In addition, a working group made up of representatives from the Departments of Finance, Treasury, National Planning and Monitoring, Education, and Church agencies has been established to advise and assist the research team from the Institute.

The research team has drawn a sample of seven Provinces and NCD to be included in the study. A total of 20 districts have been sampled from the Provinces for inclusion in the study and we would like to visit 30 community and primary schools in each District to collect data for the study. We want to speak with Head Teachers, BOM chairpersons and parents.

The Table attached to this letter indicates the Provinces and districts throughout the country that are included in the sample.

You will note that your District has been chosen for inclusion in the study. We are seeking your agreement and assistance to allow us to carry out part of the study in your District and to make time available so that the research team can discuss a number of matters with you.

I would appreciate it if you would participate in this study and to assist the research team whilst it carries out its tasks in your District. The results of the study will contribute to our understanding of resource flows and service delivery, as well as the relationship between resources and outcomes in the education sector, and contribute to policy development for the improvement of the quality of education in Papua New Guinea.

I look forward to your assistance.

Yours faithfully,

National Research Institute team leader.

<b>Provinces</b>	<b>Districts</b>
ENBP	Gazelle Kokopo Pomio
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Enga	Wabag Laigap-Pogera Kandep
NCD	NCD



#### 4. COMMENTS/ISSUES REGARDING SURVEY FORMS

##### Some General Issues:

1. Keep the survey forms neat and tidy - we do not want arrows, lines and notes written all over the pages. You might understand your notes and which question they refer to but there is no guarantee that we will understand your notes several weeks after the fieldwork has been completed.

Place the code or the extended answer clearly and legibly in the answer box provided.

2. There will be times when you are given additional information besides what the code anticipates. You should record that information in the exercise book that comes with each set of survey forms.

3. A question that does not have any sort of a code or response recorded for it is difficult for us to understand.

Was the question asked but there was no response and so nothing was recorded in the answer box?

Was the question overlooked by the researcher?

Was the question not asked because it was not applicable on the basis of the response to the previous question?

We need a response in the answer box for every question.

- If you ask the question and the answer is don't know then use code 99.
- If you ask the question and you do not get an answer then place a cross in the answer box to show that you did ask the question.
- If the question is not appropriate and you do not ask it, then write N/A for not applicable

4. The completed forms should be checked using the checklist as a guide.

5. Return the completed surveys to your regional co-ordinators as soon as possible.

## **S1. SCHOOL SURVEY**

### **1. INTRODUCING YOURSELF AT THE SCHOOL**

The school should have heard of your coming from the PEA but there will be schools that are unaware of your visit because of their isolation.

**What do you do?**

You need to introduce the team and the purpose of the study. You should name the study - the Public Expenditure and Service Delivery study. Hand a copy of the Introductory letter to the Head Teacher.

**Make the following points:**

NRI is doing the study. The Secretaries for Treasury and Finance, Education and National Planning and Monitoring have given their support for the study.

The study is designed to understand how money flows through all levels of government to arrive at a school.

The study is concerned to understand how money flows affect the kind of education services that a school can offer local communities. (eg. Full and quick payment of subsidies means that a school can provide high quality learning for children)

**The study is not an audit of the school's accounts.**

There are 7 provinces and NCD involved in the study. There are 22 districts in the study and 220 community and primary schools are involved.

This school has been chosen from all of the schools in the district. Ten schools were chosen by drawing names out of a hat.

Make it clear that there is no other reason for selecting this school. It was a random selection of schools.

People from the Provincial Administrator, Provincial Treasurer, Provincial Education Adviser, district staff, LLG officials, teachers, BOM representatives and parents are involved in the study.

The study is due to finish in July and it will influence policies to do with education and improve the practice of delivering education services throughout the country.

**In addition,**

You have a copy of a letter addressed to the Head Teacher from Dr Richard Guy.

**MAKE SURE YOU ASK FOR THE HEAD TEACHER'S PERMISSION TO CONDUCT THE RESEARCH IN THIS SCHOOL.**

## **2. SELECTION**

**Head Teacher**

If Head Teacher is unavailable, select alternative person to interview in the following order:

1. Deputy Head Teacher
2. Senior Teacher
3. Knowledgeable and long standing teacher in the school

**Grade 3 or 4 and Grade 6, 7 or 8 Teachers**

In Section J2 of S1 you are asked to select one teacher from grade 3 or 4 and one teacher from grade 6, 7 or 8 teacher to allow you to collect further information.

The selection of each of these teachers is on the basis of alphabetical order. Place the grade 3 and 4 teachers' names in alphabetical order and choose the teacher whose family name is first in alphabetical order.

Do the same with the list of teachers from grades 6, 7 and 8 and select the teacher whose family name is first in alphabetical order.

#### **One or Two Teacher Schools**

In the case of a one teacher school, you will need to administer S1 but also S2 because there are additional questions on S2 that are not on S1. This will not be difficult or time consuming. A one teacher school will have a small enrolment and many of the questions in S1 relating to staff issues will not be applicable.

In the case of a two teacher school, interview the Head Teacher using S1 and use S2 with the other teacher no matter what grade he or she is teaching.

### **3. BUDGET DETAILS**

Where possible collect a copy of the School's 2001 budget. If it is not possible to get a copy then please record expenditure for major items such as:

- Basic materials
- Textbooks
- Infrastructure
- Security
- Ancillary staff
- Equipment
- Consumables/expendables
- Vehicle expenses

### **4. ATTENDANCE**

You are asked to collect the roll book for each class and count up the number of absences. This will be done for just one day. Which day do you pick?

Do the following:

What is today's name? Now take today's name and look for the same day for last week and count the number of absences in the roll book.

For example, if you are at the school on a Tuesday then take the Tuesday for the previous week and count the number of absences for that day for each class. Record the number of absences and the date of the day for which you are recording information.

Make sure that you look at all roll books. If they are incomplete then you will need to ask the teacher how many children were absent on the day in question.

## 5. SURVEY QUESTIONS

Most questions are straightforward and you will get a speedy answer.

Here are a few ideas to help you with some questions:

### **Question 6. Census enumeration area**

You need to get the Head Teacher to identify the ward and the LLG in which the school is located.

You can then read off the census enumeration code from the sheets that we have given you.

**Question 31.** Only write down the number of classrooms that have both a teacher's chair and desk. If a classroom has a chair but not a desk, or vice versa, then this classroom does not have a chair and desk.

**Question E12.** There should be at least five people on the BOM.

**Questions F1 and F2.** Be careful when you ask questions about the parent contribution to school fees that the Head Teacher does not give you a figure that includes both school fee and the project fee. Make sure that the Head Teacher separates the school fee component paid by parents from the project fee component also paid by parents in 2000 and 2001.

There will be schools that did not set a project fee in 2000 and 2001. This should be noted on the survey form by writing Nil.

**Questions F5,F6,F7,F8,F9.** These questions do combine the school fee and the project fee. There is no need to separate the fees for these questions.

We are interested in the ability of parents to pay the fees in total.

**Questions F35 and F36.** In earlier years many schools had two bank accounts - one for the school for subsidy payments and one for the BOM for project fees. Some schools seem to be joining those accounts together and making one, which is known as a joint account and is used by both the Head Teacher and the BOM.

Basic materials in these two questions refer to exercise books, pencils, chalk, cardboard for use in the classroom.

Consumables means stationery used by teachers and office staff for administrative duties.

### **Question H. Roles and Responsibilities in Education**

Remember that it is important to use the phrase, *who has the most say?* when you ask the questions on roles and responsibilities. Follow it up with, *who else has a say?*, and then, *how much say do you have?*

After some practice you will find this to be a straightforward question.

## **6. DATA APPENDIX**

The Appendix comes at the end of S1. It can be pulled out of the folder and filled out by the other team member with the help of the Deputy Head Teacher while the Head Teacher is being interviewed by the other team member.

The Data Appendix is enrolment records and textbook numbers.

It **does not have** to be filled out with the help of the Head Teacher. It could be completed with the help of the Deputy Head Teacher or a Senior Teacher from the school. If you complete it this way it will reduce the burden on the Head Teacher who already has a lot to do answering the questions in S1.

**Remember to: Collect a copy of the School budget for 2001**

## **S2. GRADE 5 TEACHER**

### **1. INTRODUCTION**

You will need to give the *Grade 5 teacher* some background information about the purpose of the research and why we want to speak to this teacher. You should use the information that you use in your introduction to the Head Teacher mentioned earlier in this manual.

Remember the *Grade 5 teacher* has been chosen as representative of the teachers in a community or primary school.

We do not have time to interview all teachers in detail.

There is no other reason. Tell the teacher that he/she has not been chosen for any reason other than he/she is the only grade 5 teacher at this school, or was chosen because his or her name was first on an alphabetical list where there is more than one grade 5 teacher at the school.

### **2. SELECTION**

You need to select one grade 5 teacher.

If more than one grade 5 teacher is at the school, place grade 5 teachers' names in alphabetical order and choose teacher whose family name is first in alphabetical order.

If grade 5 teacher is unavailable or there is no grade 5 class at this school, then select alternative teacher to interview in the following order:

1. Grade 4 teacher, but not the one chosen in Section J2 in S1 survey.
2. Grade 6 teacher, but not the one chosen in Section J2 in S1 survey.

### **3. SURVEY QUESTIONS**

Most questions are straightforward and you will get a speedy answer. Here are a few ideas to help you with some questions:



**Question 14.** We want more than the grade here. Make sure that you get the class name such as 5b if the school uses alphabetical letters, or 5green if it uses colours or some other way of describing the class.

**Question 23.** A teacher may be new to this school this year and will not be aware how many children from last years' class progressed to the next grade. In this case put in 99=don't know.

**Question 24.** It cannot be answered if Question 23 is answered as 99.

**Question 25 and 26.** The term 'adequate amount of food' is a subjective judgement. We are concerned that some children may not get enough to eat to enable them to work well at school.

Teachers may not be aware just what children are eating at home, but they might have suspicions on the basis of how well the child appears each morning to do classwork or sports activities.

Teachers will be aware of children who do not seem to eat regularly at school.

**Question 48.** An average figure for preparation and marking time is needed here.

**Question 50.** This question refers to the availability of such things as cardboard, posters, assignment sheets, art and craft materials, coloured chalk.

The question could be answered two ways.

1. in terms of funds available, or
2. in terms of teachers skills to produce aids.

Both answers are acceptable.

**Question 72.** Some teachers will tell you their substantive level. Check that this is the level of the position that they are filling at present. Many

teachers are at a level higher than their substantive level and receive a higher duties allowance.

**Question 77.** You have been given a list of allowances that teachers might get. Be familiar with that list so that you are not surprised by their answers or if they seek clarification of the sort of allowances that you mean.

There is no need to prompt them to give you an answer by running through the list that you have.

Wait and see how they respond and record appropriately.

**Question 78.** Some teachers supplement their income by selling smokes or betel nut after school or vegetables at weekend markets. They will usually admit to this. Other teachers might do private tuition or have a second job. They are less likely to tell you this because they are not meant to have a second job as a teacher. Take care here. We are trying to assess if teachers' salary is adequate or many teachers have to find ways to supplement their incomes.

**Question 81.** It may be easier for a teacher to say that the spouse has income even though the teacher contributes to that income generation. Record who earns that income.

## **S3. BOARD OF MANAGEMENT**

### **1. INTRODUCTION**

You will need to give the BOM representative information about the purpose and extent of the research.

A Tok Pisin version of the BOM Survey is included in your folder. Use it whenever you feel that the BOM representative is more comfortable speaking in that language.

### **2. SELECTION**

If the Chairperson of the Board of Management is unavailable, select an alternative person to interview in the following order:

1. Treasurer
2. Secretary
3. Any other BOM representative

### **3. BUDGET DETAILS**

Where possible collect a copy of the BOM's 2001 budget. If it is not possible to get a copy then please record expenditure for major items such as:

- Basic materials
- Textbooks
- Infrastructure
- Security
- Ancillary staff
- Equipment
- Consumables/expendables
- Vehicle expenses

And the major sources of income and amounts in the budget such as subsidies, project fees, donations, donor assistance.

It would also be useful to get a copy of the BOM Treasurer's report for 2001.

### **4. SURVEY QUESTIONS**

Most questions are straightforward and you will get a speedy answer.

Here are a few ideas to help you with some questions:

**Question 21.** The BOM might have an interest bearing deposit (IBD) or a trust account for a special project. This would be important to know together with the value of the deposit.

**ASK FOR A COPY OF THE BOM BUDGET FOR 2001 .**

**Also ASK FOR A COPY OF THE TREASURERS REPORT FOR 2001 .**

## **S4. PARENT**

### **1. INTRODUCTION**

You should give an explanation of the purpose and extent of the research before you commence the interview.

A Tok Pisin version of the Parent Survey is included in your folder. Use it whenever you feel that the parent is more comfortable speaking in that language.

### **2. SELECTION**

We do not want the Head Teacher to nominate the most outspoken parent from the school.

Tell the Head Teacher that we want an 'average parent' rather than an outstanding parent. This is our opportunity to talk with 'mamas and papas' about the school and what it is like to pay fees.

Make sure that you alternate the selection of parents from male to female at each school that you visit so that we get a good balance overall of male and female parents.

### **3. SURVEY QUESTIONS**

Most questions are straightforward and you will get a speedy answer in most cases.

#### **Questions 41 and 42.**

These questions are linked.

The first one is trying to find out the reason for sending children to school.

The second question is trying to understand if parents think that school activities and programs will help the child to achieve that purpose after they have left school.

In other words, is the school providing children with knowledge and skills that the parent thinks are valuable and relevant and make it worthwhile to send the child to school.

**Question 63.**

The last part of this question asks what other parents think about school. Some parents may not want to say anything on behalf of others, but some parents will make a comment. There is no need to try and get four responses from the parent on this part of the question unlike the first two parts to that question.

Write down whatever the parent says and finish the interview.

## **D2: DISTRICT EDUCATION ADMINISTRATOR**

### **1. INTRODUCTION**

You will need to give the DEA background information about the purpose of the research and why we want to speak to the DEA. Hand a copy of the Introductory letter to the DEA.

You should use the same kind of introductory information that you used with the Head Teacher mentioned earlier in this manual.

### **2. SELECTION**

If DEA is unavailable it may be appropriate to interview senior inspector who may have deputised for DEA from time to time and is able to answer questions reliably.

### **3. BUDGET DETAILS**

Where possible collect a copy of the District's 2001 budget. If it is not possible to get a copy then please record expenditure for major items such as:

- Basic materials
- Textbooks
- Infrastructure
- Security
- Ancillary staff
- Equipment
- Consumables/expendables
- Vehicle expenses

It will be very useful to get the budget for all government sectors (eg. Health, Works, Agriculture) so that we can assess how much priority is given by the District to spending on Education or if other divisions get a greater share of the funds.

If it is not possible to get information for all sectors then make sure that you get it for Education.

### **4. SURVEY QUESTIONS**

Most questions are straightforward and you will get a speedy answer in most cases.

#### **Question 29.**

The term 'exclusive use' in this series of questions means that equipment or facilities have been provided solely to the District Education Office rather than to the District Office for common use to be shared between Divisions such as Health, Education and Works.

#### **Question 35.**

Some schools in the District may be closed indefinitely or suspended for a range of reasons. We are interested in the total number of schools closed or suspended on the day that you are visiting.

- Schools might be **closed** because there are no teachers available to open it.
- Schools might be **suspended** because of administrative reasons and some kind of investigation will be done before the school is re-opened eg no water and it is closed for health reasons until the problem can be investigated and remedied.

If a school is re-opening tomorrow but closed today then it counts as a school closed today.

#### **Question 46.**

We do not need the names of DEB members, but which organizations they represent and the gender of each person.

**COLLECT A COPY OR SUMMARY OF THE MAJOR EXPENDITURE ITEMS SUCH AS INFRASTRUCTURE, HEALTH, AND EDUCATION IN THE DISTRICT'S 2001 BUDGET.**



## **H1. HEALTH FACILITY SURVEY**

### **1. INTRODUCTION**

You will need to give the Health Worker background information about the purpose of the research and the work that is being done at the local school and why we want to talk about the health facility.

The reason we are including the health centre is to understand how it is functioning as part of the delivery of basic services such as health and education in the local area.

Stress that the major part of the study is the education facility. Point out that we are hoping to include up to 220 health centres in the study and we have a standard questionnaire that we would like them to complete.

Inquire when it would be suitable to sit down and talk with them about the questions in the survey.

### **2. SELECTION**

Interview person in charge of health facility such as the Sister, Administrative Officer or Aid Post Orderly.

### **3. SURVEY QUESTIONS**

Most questions are straightforward and you will get a speedy answer in most cases.

#### **Question 33.**

You may need to probe this question. Try to get the health worker to indicate the actions that they would take to treat a child with diarrhoea in the local area. We do not want to know what the standard treatment is, but what they are able to offer patients through their health facility and the resources they have at their disposal.

## 5. RESEARCH ASSISTANTS - CHECKLIST

Activity	Insert School Name (tick as completed)	Insert School Name (tick as completed)	Insert School Name (tick as completed)
<ul style="list-style-type: none"> <li>Contact Head Teacher upon arrival at school</li> </ul>			
<ul style="list-style-type: none"> <li>Outline purpose of visit</li> </ul>			
<ul style="list-style-type: none"> <li>Inform Head Teacher of need to:</li> </ul>			
interview Head Teacher			
interview Grade 5 teacher			
interview a teacher from grade 3 or 4			
interview a teacher from grade 6, 7 or 8			
interview BOM chairperson			
interview a parent			
collect copy of School budget for 2001			
collect attendance information from roll books			
<ul style="list-style-type: none"> <li>Gain permission from Head Teacher to carry out the research in this school</li> </ul>			
<ul style="list-style-type: none"> <li>Administer survey (S1) to Head Teacher.</li> <li>Make sure to:</li> </ul>			
confirm census enumeration area code			
collect copy of school budget for 2001			
collect information required for the Appendix to S1			
collect all class roll books and count the number of absences on this day last week			
interview a teacher from grade 3 or 4			
interview a teacher from grade 6, 7 or 8			
<ul style="list-style-type: none"> <li>Administer survey (S2) to Grade 5 teacher</li> </ul>			
<ul style="list-style-type: none"> <li>Administer survey (S3) to BOM chairperson</li> </ul>			
collect copy of BOM budget for 2001			
collect copy of BOM Treasurer's Report for 2001			
<ul style="list-style-type: none"> <li>Administer survey (S4) to Parent</li> </ul>			
<ul style="list-style-type: none"> <li>Administer survey (D1) to District Education Administrator</li> </ul>			
collect copy of District budget for 2001			
<ul style="list-style-type: none"> <li>Administer survey (H1) to Officer-in-Charge of Health Facility</li> </ul>			



# Seminar on Public Expenditure Tracking in Education

MoEYS CAMBODIAN TEAM  
30<sup>st</sup> June 2004

## PETS OBJECTIVES

- To track not wage expenditure at school level & find causes of capture.
- Improve the Existing Financial Systems in the whole of Education Sectors to minimize captures.

## PETS ACTION PLAN

- An independent PETS.
- The sample to be surveyed : MEF, MoEYS, 12 PEOs, 67 DEOs, 210 schools.
- Scope :
  - Financial Management in RCG systems, Donors & Others.
  - Regulatory Compliance Systems.
  - Analyzing the ways of the MoEYS reform systems
  - Efficiency of text book quantity & Distribution.
- Program: Survey sheet designed, Staffing, Training, Pilot Survey implementation on field, Survey, Testing, Monitoring, Researcher, Data Entry, Data Analyzing, Compilation, Dissemination.

### Summarized Proposal

<u>Category</u>	<u>Tasks</u>	<u>Background</u>	<u>Number</u>
Management	Coordinator, Disseminating.	MBA, ACCA	3
Analysis	Monitor Data Entry, Data Analyzing	CPA, MBA, ACCA	8
Researcher	Preparing Survey sheets, Organizing, Training, Supervising survey, Collecting data at central level, Reporting.	MBA, ACCA MRD, MPR	12
Enumerator	Data collection in all level, Data entry and Checking.	Retired from MoEYS, MEF , MRD and graduate students	75

## PETS IMPLEMENTATION AND MONITORING

Activities Level	# Institution Visited	Staff Involved	Time Required
<b>CENTRAL</b>			
Introductory Visits ( MEF, Gvt, Council Ministries, MoEYS, Ministry Public Function, Press, Donors, Provincial Gvt )	20	3 Managers & 3 Researchers	2 Weeks
Survey Sheet Design		5 Researchers	3 Weeks
Training		12 Researchers 175 Enumerators	4 Weeks
Revise Sampling		2 Researchers	2 weeks
Pilot	2 DEOs, 24 schools	1 Researchers 24 enumerators	2 weeks & 3 days
Revise Questionnaires		10 Researchers	2 weeks
Collect Data	02 Ministries, 12 PO, 12 PEOs, 64 DEOs, 350 Schools	12 Researchers 75 Enumerators	3 weeks 35 weeks
Monitoring data collection		12 Researchers	10 weeks
Data Entry		24 enumerators	6 weeks

## Time Frame

Months	1	2	3	4	5	6	7	8	9	10	11	12
Weeks	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Activities												
<b>Central</b>												
Introductory Visit	XX											
Staffing												
Researchers-Contract	XX											
Enumerators	XX											
Survey Design		XX										
Training		XX	XX									
Testing			XX	X								
Revising Sampling			X									
Collection Data				XXX								

## Time Frame ( Cont. )

Revising Questionnaires				X	X							
Prepare Survey Manual					XX							
<b>Province</b>												
Collect Data						XXXX	XXXX	XXXX	XXX			
Monitoring						X	X	X	X			
Data Entry- Cleaning, Compilation										XXXX		
Data Analyzing											XX	
Report											XX	
Dissemination												X
<b>Total</b>	<b>Months:</b>	<b>12</b>										
	<b>Weeks Working</b>	<b>48</b>										

## Budget Planning

Category	Cost/day month	Number	Number WD	Total
<b>Manager</b>	\$ 230	3	12	\$ 8,280
<b>Sub-Total 1</b>				<b>\$ 8,280</b>
<b>Researchers</b>				
A	\$ 70	3	190	\$ 39,900
B	\$ 70	3	125	\$ 26,250
C	\$ 70	6	125	\$ 52,500
<b>Sub-Total 2</b>				<b>\$ 118,650</b>

## Budget Planning ( Cont.)

<b>Enumerators</b>				
Trainees	\$ 5	75	20	\$ 7,500
Pilot	\$ 30	13	11	\$ 4,290
Collect Data	\$ 30	75	190	\$ 427,500
Data Entry	\$ 25	24	20	\$ 12,000
<b>Sub-Total 3</b>				<b>\$ 451,290</b>

## Budget Planning ( Cont.)

<b>Others</b>				
Miselenous				\$ 3,000
Computers	\$ 1,700	12		\$ 20,400
Photocopy	\$ 8,000	1		\$ 8,000
Supplies				\$ 1,500
Car	\$12,000	1		\$ 20,000
Transportation	\$ 15	187		\$ 2,805
Rental Car	\$ 150		10	\$ 1,500
<b>Sub-Total 4</b>				<b>\$ 57,205</b>
<b>Grand Total</b>				<b>\$ 635,425</b>



## Dissemination

- PETS, MEF and MoEYS should involve in the dissemination of the survey's results.
- The dissemination should conduct by two time:
  - By the end of the pilot survey.
  - By the end of the whole surveys.( The preliminary information )
- The teacher's salary, the financial management systems & the disbursement on right time-right activity would get benefit first.

## Disseminated Planning

- **Objectives:** Showing data finding & Needed Gvt involvement in improving the decision making policy.
- **Target:**
  - MEF, MoEYS, Government and National Assembly
  - Teachers & Parents.
- **Procedure:**
  - Management Report to MoEYS, MEF, National Assembly & Donors, then meeting.
  - Summary report to government.
  - MoEYS Magazine
  - Media
  - Opened National Seminar

# PETS for Health in Cambodia

1

## Objectives

1. Assist the GOC in identifying problems in health financing
2. Serve as an independent monitoring tools to assist the GOC in improving accountability and transparency
3. Identifying the allocation and management of government resources to find the way for donor funding
4. Compare procedures and significant of respective budget systems (Chapter 11, ADD and PAP) for Health

2

## Research Question

Why is increased GOC health spending resulting in increasing incident and mortality rate for children ?

3

## Tentative Answers

- Poverty increased
- Social safety net has not been improved
- Household spending for health increased
- Govn't budget on health increasing, while number of sick children increasing
- Spending on the wrong goods or people
- Failure of funds to reach frontline service providers

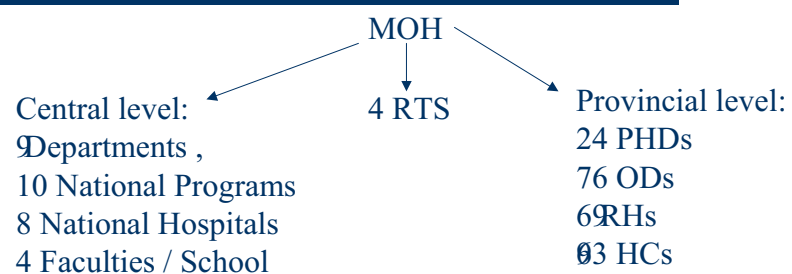
4

## Tentative Answers (Cont.)

- Weak provider incentives for service provision
- Demand side failure that prevent household from taking advantage of service provision
- Reduce fiduciary risks to public funds
- Mark-up price increasing (procurement)
- Overlapping of fund (high gap)

5

## Organizational Structure for Health



6

## Sources of Fund

- Government fund
- Donors
- Household
- Fees for Service
- Others

7

## Govn't Fund Flow Chart

There are 7 main chapters for MOH

1. Chapter 10 (Salaries)
2. Chapter 11 (Operating Costs)
3. Chapter 12 (Autonomous institutions)
4. Chapter 13 (Operating Costs for PAP&ADD)
5. Chapter 31 (Social allowances)
6. Chapter 32 (Counterpart contribution)
7. Chapter 50 (Capital investment)

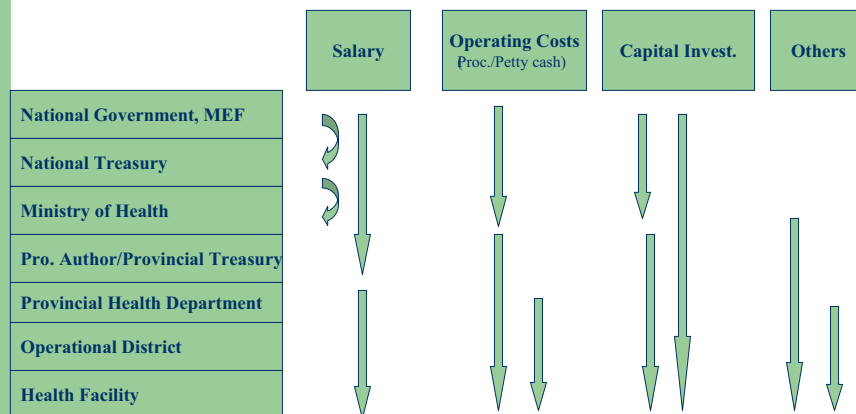
8

## Value for selected Health Indicator 2003

- MOH Staff per 1000 Inhabitants: 0.29
- MOH Recurrent Budget % of GOC budget: 11.4%
- MOH Salary % of total health budget : 16%
- Contracting ODs: 9
- Drugs % of total health budget: 45%
- GOC budget allocated to health: about \$3 per capita

9

## Govn't Fund Flow Chart (Cont.)



10

## Possibility for Corruption

- Nepotism
- Over-reporting of Health Information
- Procurement (Drugs, Med. Supp...../Fraud)
- Procedures and mechanism
- Leakages

11

## Sample Size

- Central unit: 20 national programs/hospital
- Province: 10 provinces (5 PAP, 5 ADD&Ch.11)
- OD: 20 districts
- RH: 20 RHs
- HC: 200 HCs

12

## People and Budget Needed

People	Budget
- Central: 6 (6x4dx40x\$25)	\$24,000
- Provincial: 10 (10x2x20x\$15)	\$6,000
- District: 20 (20xd10x\$10)	\$2,000
- Researcher/Enumerators (independent): 12 (12x40dx\$50)	\$24,000
- Data entry and analysis	\$50,000
Sundries (10%)	\$10,600
Total	\$116,600

13

## Data Entry and Cleaning

Do checking while collecting data by research team leader

Time required

Data collection: 4 months (Aug-Nov/2004)

Data cleaning and Analysis: 5 months

14



## Methodology

- Existing data (from Household survey, DHS, NHS, HIS...)
- Spreadsheet
- SPSS
- Other statistical tools

15

## Preliminary Findings

Draft report and comment: March 2005  
Feedback and approval: May 2005  
Dissemination and launching: June 2005

16

## Dissemination and Plan

- Improve transparency and accountability
- Reduce resources leakage
- Used by policy-maker
- Hence, mortality and incident rate decreased

To achieve this, however, high commitment from top levels (MOH and MEF), political commitment stakeholders, and country ownership are critical.

17

## To Whom Disseminated

- Government institutions (Cabinet, Province, and lower levels)
- All partners
- Community and NGOs
- All stakeholders

18

# PETS

## ■ KENYAN CASE

## ■ WE WERE AWARE IN PETS - OVERVIEW

- The Kenyan Government has not yet undertaken a PETS to date, however a quasi-government organization undertook a PETS in the Ministry of Education but the outcome has not been released disseminated.

- Currently, the Ministry of Finance in collaboration with other stakeholders (Ministries of Planning, Education and Health) is in the process of organizing a PETS in the education and health sectors.
- The main areas of focus will be secondary school bursary and drugs in the rural health centers.

- At the same time the Ministry of Education is in the process of contracting a consultancy service to undertake a PETS for Free primary school funds.

## PROBLEM

- There is a higher rate of increase in the allocation of funds devoted to Bursaries for the girl child than the rate of improvement in their performance especially in sciences.

## OBJECTIVES

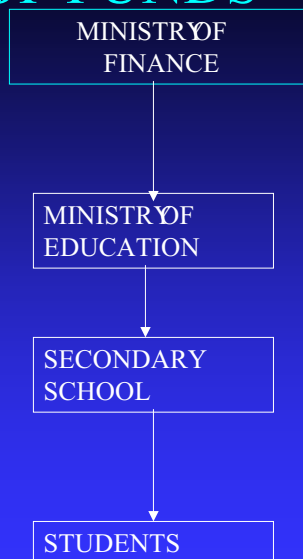
- Find out the reasons why the performance of the girl child does not improve despite the increase in the budgetary allocation
- Identify the leakages in the flow of bursary funds
- Make recommendations for interventions to improve the trend.

## Agencies that Finance Education

- Communities (PTA) Yes, O&M, Development
- Private Sector Initiatives Yes, O&M, Development
- Schools' Internally generated funds - Yes, O&M, DEVT

## FLOW OF FUNDS

- .



## Opportunities for leakages

- Weakness in identification of bursaries and scholarships beneficiaries.
- Overstatement of enrolment (Basis for allocation)
- Limited capacity of BOG/PTA members
- Directing bursary funds to non-existing Schools/beneficiaries
- Irregular promotion of head teachers
- Limited capacity in financial management in schools

## Opportunities for leakages

- Ghost Teachers
- Irregular procurement of stores/books
- Illegal fees and levies
- Mismanagement in schools where BOG is weak
- Weakness in identifying the appropriate textbook titles for the school curriculum

## Opportunities for leakages

- Irregular promotion of head teachers  
Limited capacity of BOG/PTA members
- Limited capacity in financial management in schools
- Weakness in identifying the appropriate textbook titles for the school curriculum

## QUESTIONNAIRE

- DATA REQUIREMENTS
- Number of girls' schools
- Number of girls enrolment
- Number of schools by province, district
- Amount allocated in a series of 5 (five) years
- Drop-out rate



## QUESTIONNAIRE cont

- Examination results for girls
- Others

## EXISTING DATA

- Non of the data is already assembled in a data base

## QUESTIONNAIRE REQUIRED

- For Ministry of Finance
- For Ministry of Education
- For Schools
- For Students

## SAMPLING FRAMEWORK

- 2 STAGE CLUSTER SAMPLING
- SIMPLE RANDOM SAMPLING

# **PUBLIC EXPENDITURE TRACKING SURVEY (PETS) FOR SECONDARY SCHOOLS BURSARIES IN KENYA**

## **RECAP**

### **PROBLEM**

- Despite the increase in the allocation of funds devoted to bursaries for the girl child, the improvement in their performance especially in sciences has not improved.

### **OBJECTIVES**

- To find out the reasons why the performance of the girl child does not improve despite the increase in the budgetary allocation
- To identify the leakages in the flow of bursary funds
- To make recommendations for interventions to improve the performance

## BACKGROUND

Provinces - 8

Districts - 70

Area - Around 500,000 sq km

Topography - Hilly, Plains

Girls Secondary Schools - 1,200

Sample Size - 200 schools

- The survey to be carried out in 8 provinces and 30 districts in October 2004
- The qualification of survey staff will be college level education. Knowledge and experience in computers will be an added advantage
- Data entry and cleaning clerks will require a background in statistics
- Survey to take a maximum of 75 days
- A pilot will be carried out first
- 5 groups in pairs will initially start the survey in 2 districts
- Each group will be under the supervision of one supervisor
- Training of supervisors and enumerators will be undertaken for a period of 10 days
- Dissemination workshops with all stakeholders will be held after a draft report and before the final report is produced

**STAFFING AND BUDGET**

	<b>Staff Category</b>	<b>Tasks</b>	<b>Education/Experience</b>	<b>Number</b>	<b>Time</b>	<b>Cost - US\$ per day</b>	<b>Total in US\$</b>
1	Coordinator	Overall In-charge of PETS upto dissemination and report production	College graduate/ Experience in PETS	1	75 Days	300	22,500
2	Researchers	Preparation, Organizing, Supervising data entry cleaning clerks, data Management, Analysis and report writing	College graduate with specialties in Education, sociology, computer and surveys	3	75 Days	125	28,125
3	Supervisors	Supervising enumerators and undertake pilot survey	Retired teachers and Education officers	5	10 days -training 5 days -pilot 30 days-survey Total = 45 Days	30 - sda 20 - fee Total = 50	11,250
4	Enumerators	Data collection in schools	Graduates with specialties in Education, Sociology and computer	10	10 days -training 30 days- survey	20 - sda 10 - fee Total = 30	12,000
5	Data Entry/Cleaning clerks	Data Entry/Cleaning	Clerks with statistical background	8	10 days	30 - sda 10 - fee Total = 40	3,200

**OTHER COSTS: TRANSPORT**

<b>ITEM</b>	<b>Activity</b>	<b>RATES</b>	<b>TOTAL ( US\$)</b>
Field work	Field work 5 4wheel drive vehicles	For 30 days at U\$100 per day	15,000
Drivers	5 drivers	For 30 days at U\$ 20 per day	3,000
Contingency	5 %		6,317
<b>TOTAL COST</b>			<b>132,641</b>



LAO P.D.R

Team Report

On section 1 & 2



## Outline

- Problems
- Objective
- Flow chart resources
- Source of data
- Questionnaire design

### Problems:

1. Low access to school
2. Insufficient Learning and teaching materials
3. Low public expenditure at school level
  - Capital expenditure at school
  - Recurrent expenditure at school
4. Poor capacity and management at school

### Objective:

1. To determine factors affecting low access and completion of primary education in Lao PDR.
  - Infrastructure in schools
  - Teachers
  - Cost of education etc
  - Community participation
2. Why are there insufficient learning and teaching material in schools in Lao PDR
  - Textbooks distribution
  - Low parent contribution to Learning and teaching materials
  - Low budget allocation at different levels.
  - Low expenditures for materials and textbooks at school.



Objective (Continue):

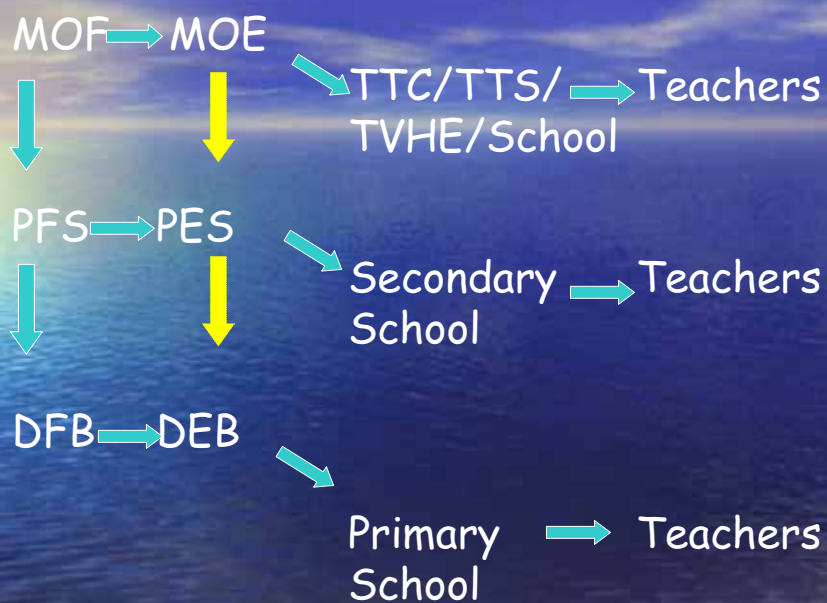
3. Why capacity and management is poor in schools in Lao PDR

- Training
- Organization at school and roles of teachers
- Motivation

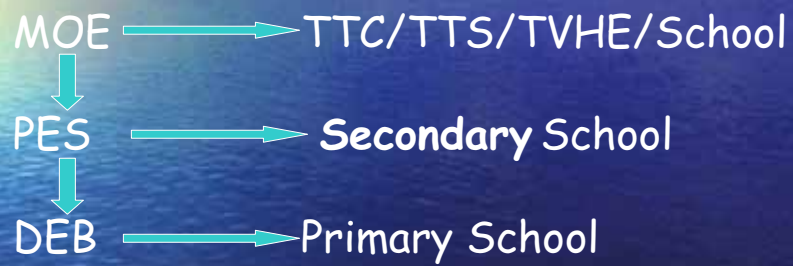
4. What is the level of spending in school in Lao PDR

- > Recurrent and development
- > Parents, communities, NGOs, govt and others.

Flow chart of the budget allocation and salaries:



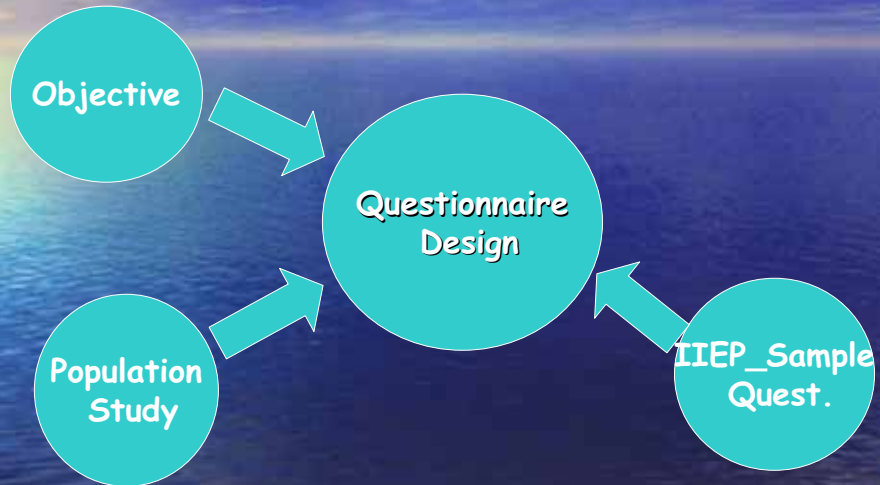
### Flow chart of textbooks, learning and teaching materials:



### Source of data:

1. Ministry of Finance
2. Ministry of education
3. Provincial finance service
4. Provincial education service
5. District finance bureau
6. District education bureau
7. School director

## Questionnaire design base on:



# **LAO P.D.R**

## **Country Team Report**

### **Course on PETS**

#### **Section 3 & 4**

**Phnom Penh 21-30-06-04**

## **Outline**

- **Objective**
- **Staffing**
- **Implementing and monitoring**
- **Data entry and Cleaning**
- **Data analysis**

### **Objective :**

1. To monitor and evaluate public expenditure at school level
  - Capital expenditure at school
  - Recurrent expenditure at school
2. To improve and increase Learning and teaching materials

### **Staffing :**

In Lao P.D.R, the Sample to be surveyed and regarding to the country conditions we would select about 280 schools, covers 40 district and 18 provinces,

In the survey necessitate to visit Central, Province, District and Schools

The qualification of survey staff to be in conformity with lessons of experience, teachers to be recruited.

## Staffing (cont.) :

The table below summarizes these proposals.

Category	Tasks	Education Experience	Numbers
Researchers	Preparing, Organizing, supervising, survey, collecting data at central and province level, analyzing data, preparing reports, disseminating results	Experience in conducting social education and/or financial surveys. One of them with experience in textbook production and distribution	12
Enumerators	Data collection in Central, provinces, districts, schools, warehouses. Data entry and checking.	Concerned Ministries staff, Statisticians,	48

## Implementing and monitoring

### Implementation and Monitoring Plan

ACTIVITIES LEVELS	No. institutions visited	Staff involved	Time Required
<b>CENTRAL</b>			
Introductory visits (Ministries, Govt. Press, donors, etc.. )	12	2 Researchers	2 weeks
Hire/contract 10 researchers		2 Researchers	2 weeks
Train Researchers + Collect data Central level Collect data/Field test Questionnaires PES, DEB, 1 school near capital, 1 textbook warehouse	12 4	12 Researchers	2 weeks 2 weeks
Revise sampling		2 Researchers	2 weeks
Revise sampling		6 Researchers	2 weeks
Revise questionnaires		4 Researchers	2 weeks
Prepare survey manual			
<b>PROVINCES</b>			
Collect data PES	18	12 Researchers	2 weeks
<b>DISTRICTS</b>			
Hire 36 Enumerators		12 Researchers	2 weeks
Train Enumerators + Collect data at schools	36	12 Researchers 36 Enumerators	2 weeks
Collect data DEB, schools , Warehouses	36	36 Enumerators	12 weeks
Monitor data collection		12 Researchers	12 weeks
Data entry, cleaning, compilation		15 Enumerators	4 weeks

## Implementing and monitoring

Plan Activities							
Months	October	November	December	January	February	March	April
Weeks	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x
Introductory visits (Ministries, Govt. Press, donors, etc.. )	x x						
Hire/contract 12 researchers	x x						
Train Researchers + Collect data Central level Collect data/Field test Questionnaires PES, DEB, 1 school near capital, 1 textbook warehouse		x x					
Revise sampling		x x					
Revise questionnaires		x x					
Prepare survey manual		x x					
PROVINCES							
Collect data PES			x x				
DISTRICTS							
Hire 36 Enumerators			x x				
Train Enumerators + Collect data at schools			x x				
Collect data DEB, schools , Warehouses				x x x x	x x x x	x x x x	
Monitor data collection				x x x x	x x x x	x x x x	
Data entry, cleaning, compilation							x x x x

### Data entry and Cleaning:

1. Manual or code book
  - Office cleaning manual
  - Program manual book
2. Program data entry should be matched with the questionnaire
3. Re-contact to enumerators

## **Analysis :**

1. Base on objective of PETS
2. Percent of leakages
3. Finance distribution
4. Impact of the PETS
5. Causes



# **PUBLIC EXPENDITURE TRACKING SURVEY in EDUCATION: MONGOLIA**

Phnom Penh, June 21-30

- I. Objectives**
- II. The organizational &  
institutional context**
- III. Finance of education**
- IV. Questionnaire for primary  
school survey**

Phnom Penh, June 21-30

## BASIC INDICATORS

- **GDP/population** - \$490 [2003]
- **% of population in poverty** - 36% (1998); 25% (2003) - 60% of nomads in poverty
- **GER Primary** - 100%
- **GER Secondary** - 92.6%
- **Gov. Edu. Spending as Percent of GDP** - 8.7%
- **PEE as % of total GES Spending** - 19.7%
- **TNPS teachers by MOE** - 20,700 – in 593 schools
- **TNPS teachers employed by Other Levels of Government** - 2302 (school directors, headmasters, social workers at schools and local education board officers)

Phnom Penh, June 21-30

**What are the main questions that we would like a PETS to help clarify in Mongolia?**

Phnom Penh, June 21-30

## **OBJECTIVES of PETS**

- To enhance understanding of how education expenditure can be more effective
- To provide sufficient information to improve quality of education
- To enhance monitoring and evaluation system

Phnom Penh, June 21-30

## **The organization and finance of education**

Phnom Penh, June 21-30

## INSTITUTIONAL FRAMEWORK

- Organization of Government
- Recent general and education decentralization initiatives
- Organization of basic/primary education
- Community participation

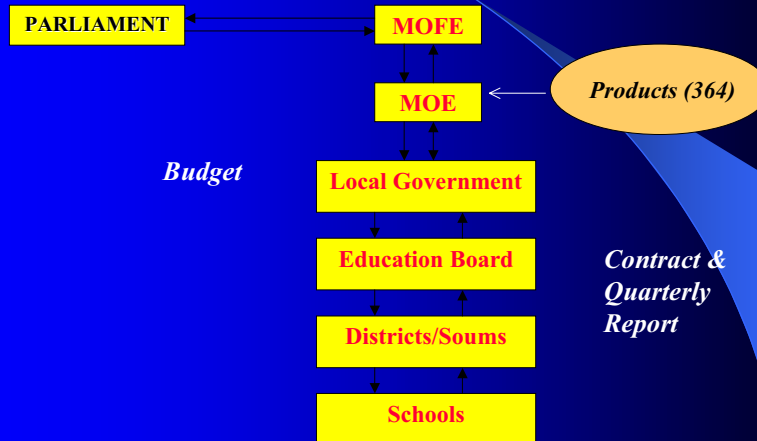


Phnom Penh, June 21-30

**How the education is financed?  
Please give 5 important  
expenditure categories? Where  
do we think the opportunity for  
leakage?**

Phnom Penh, June 21-30

# FINANCE of EDUCATION



Phnom Penh, June 21-30

## 5 MAIN CATEGORIES of EXPANDITURE

- Salary and Supplementary wages – 55.2%
- Electricity and Heating – 28.9%
- Other repair costs – 7.4%
- Feeding for students in dormitory – 4.3%
- Investments such as textbook printing, extension of existing building, supplies – 2.4%

Phnom Penh, June 21-30

## OPPORTUNITIES FOR LEAKAGES

- I. In the ministry level:
  - Open tender (construction, textbook, stationary for poor, equipment, PC etc.)
  - Scholarship (budget for study in abroad)
- II. Local education board:
  - Planning of budget/bias in estimation of demand and needs
  - Academic fraud

Phnom Penh, June 21-30

## OPPORTUNITIES FOR LEAKAGES

- III. In school level:
  - Variable cost planning
  - Weak monitoring system
  - Nepotism for supplementary salaries and incentives
  - Parents pay for maintenance/renovation
  - Dormitory food expense
  - Textbook fee
  - Tutoring or advanced courses payment
  - Illegal use of recourses created by parents

Phnom Penh, June 21-30

# **The questionnaire for primary school survey**

Phnom Penh, June 21-30

## **QUESTIONNAIRE**

**The followings are done:**

- **Some questions are excluded**
- **Some questions are added**
- **Some sub-divisions are added**
- **Some changes/modifications are made**
- **One section is added in last part**



Phnom Penh, June 21-30

**What is the composition of  
Mongolian PETS team?  
Which questions do we need  
to develop? How & when  
should survey work be done?**

Phnom Penh, June 21-30

## **The factors that we have to concern:**

**The staffing should be identified:**

- **According to the objective(s)**
- **According to the timeframe – 9 months**
- **According to the budget – 70,000 USD**
- **According to the sample size & its  
distribution – 100 schools in 11 aimags  
and 4 districts**

Phnom Penh, June 21-30



	TASK	# of STAFF	EXPER./ EDUCATION	TIME (by month)	BUDGET (USD)
Manager	Coordinate and manage whole survey	1	Economist and Researcher Exp. In social sector + managerial skill	9	600 <b>5,400</b>
Consultant	- Sampling - Questionnaire - Analysis; etc.	1-2	Degree in education field and exp. In education and/or economics sector...	1-2	550 <b>6,600</b>
Researcher and Data Mngt specialist	- Sampling - Questionnaire - Data collection - Data analysis etc.	3-4	- Sociologists - Educators - Statistician/Data manager	6	350-400 <b>9,600</b>
Supervisors	- Supervise and Monitor the field work	6 (1 for each region)	- Economist, sociologists and/or social worker - Local knowledge	1.5	250 <b>3,000</b>
Enumerators	- Participate in the training - Collect data and report	15 pair (1 pair per province)	- Experience in survey/data collection - Communication skills	1 month	200 <b>3,000</b>
Operators	- Data entry - Cleaning	3	- Computer skills - Typing skills - Exp in data entry	2	200 17 <b>1,200</b>

## BUDGETING:

- **Salary – 28,800**
- **Transportation -**
- **Stationary -**
- **Copying –**
- **Translation cost –**
- **Programming –**
- **Promotion fee -**
- **International consultant –**
- **Others –**
- **Total – USD 70,000**

Phnom Penh, June 21-30

## DATA COLLECTION & MONITORING

LEVEL	# of INS.s to VISIT	# of STAFF	TIMEFRAME
MOFE & MOE	2	2 (manager + consultant/researcher)	1 week
Local governor in each level	15 (11 aimags + 4 districts)	6 (consultants + researchers)	3 weeks
City & Province Edu. Board	15 (11 aimags + 4 districts)	6 (consultants + researchers)	3 week (parallel with above one)
Soum & District level	44 (11 aimags * 4 soums)	10 (Researchers + supervisors)	6 week
School	97 (7*11 + 5*4 )	20 pair (enumerators)+ /supervisor/	1 month
Data compilation	-	All	2 weeks

Phnom Penh, June 21-30

**What analysis is required to answer the issues addressed by the PETS in Mongolia?**

Phnom Penh, June 21-30

## **ANALYSIS OF LEAKAGE**

- **Comparing funds disbursed at central, province and school level**
- **Comparison of expenditure types related to rural and urban schools**
- **Identifying the difference between planned/allocated centralized investment (teachers IST, renovation) and its spending by various levels**

Phnom Penh, June 21-30

## **ANALYSIS OF CAUSES**

- **Analysis of variations between schools by**
  - **characteristics of schools**
  - **number of qualified teachers**
  - **number of size of school**
  - **number of visits/monitoring**
- **Analysis research questions and test hypothesis (during the process of preparation)**

Phnom Penh, June 21-30



## **Opening Address by Senior Minister Keat Chhon, Minister of Economy and Finance, Royal Government of Cambodia**

Excellencies,  
Ladies and Gentlemen,

I welcome this opportunity to make an opening address to this important seminar on applying the Public Expenditure Tracking System (PETS) technique to analyze the path of public expenditure in the education sector.

As many of you are aware, the Ministry of Economy and Finance is nearing the end of a process which started at the beginning of this year to set a clear vision for the system of public financial management (PFM) to which the Government could aspire over time and a reform program to realize that vision. The draft reform program proposes strengthening and upgrading PFM through four successive stages, with the each stage aimed at establishing a platform on which to construct the later platforms.

The objective for the first stage is to establish a more credible budget. Only when this objective has been reached will there be a solid enough basis to move on to the second stage which will be aimed at establishing the next platform with its objective of clear accountability for the management of financial and other inputs. Obviously, until the budget is more credible, management cannot be held properly to account for the good management of the financial and other resources which the budget promises but often has not delivered, at least in full.

Again, once this second platform is solidly entrenched, the PFM reform program can then proceed to construct the third platform whose objective is to forge the strongest linkages between the formulation of the government's policy agenda and the budget to ensure a fully-affordable policy agenda within a general expenditure program framework template which has yet to be designed. The last stage of the reform program is aimed at establishing effective program performance accountability.

The draft PFM reform program is designed to incorporate both past PFM improvements which are now in operation as well as currently ongoing reform work. Much of the progress to-date has been on a pilot basis and the Ministry of Education, Youth and Sport (MOEYS) has been the focus of much of this piloting. Over the past few years, MOEYS and my Ministry have developed a very productive and constructive relationship for implementing broader financial reforms within the education sector. The logic of the new consolidated PFM reform program's platform structure brings a new framework to this collaboration because it focuses attention on the need for prioritizing and sequencing in the deployment of scarce skilled local capacity and costly foreign expert technical assistance. Starting now, we need to concentrate these scarce and expensive PFM reform resources on achievement of our most basic platform objective of achieving a more credible budget. Nonetheless, we must also ensure that the reform momentum already established in MOEYS is not diminished or lost. We must face the challenges together and work out ways of working together for the benefit of Cambodia's students. I look forward to the jointly beneficial contribution which the PETS surveys and findings should make to this.

As highlighted in the 2003 Integrated Fiduciary Assessment and Public Expenditure Review (IFAPER), the initial results of the education reform program have been very encouraging. The MOEYS focus on policy priorities and results has enabled the Government to have growing confidence in increasing government resources for education. Over the past 4 years, education recurrent budget share has increased from around 14% in 2000 to over 19% in 2003/04, a three-fold increase in education recurrent budget volume. Similarly, operational budget support, through the Priority Action Program (PAP) mechanism has also grown dramatically to over Riels 70 billion last year, compared to only Riels 10 billion in 2001.

I would like to congratulate MOEYS on the initial impact of its reforms, in particular in providing growing education opportunities for the children of poor families. The reduction in informal cost barriers has meant an additional 0.6 million children, mainly from the poorest communities, are now in school. I am particularly mindful that the reduction in students repeating grades, not only increases student retention but generates cost savings for government and parents. I would therefore anticipate that one of the outcomes of the PETS survey should be to ensure that these reform strategies can have even more impact on access, quality and efficiency in education.

The newly reformulated draft PFM reform program will provide increasingly for public expenditure to take on a results orientation through development of more results-based management of sector financing. All sector budgets, including the education budget, will come increasingly to be used as instruments of policy development and enrichment and not simply to maintain the existing system. The PAP mechanism has provided a very useful start in enabling an emphasis on accountability for sector program outputs and impact rather than only on accounting for expenditure outlays.

Through the course of the reform program, other elements of the budget, including civil service salary budgets (Chapter 10) and operational resource budgets (Chapter 11), will assume an increasing results focus. Once again, the education ministry has made a good start through the introduction of more performance-oriented staff allowances for priority staff, including school directors and teachers in remote and difficult schools. The PETS survey and other analysis by the MOEYS must be used to ensure that, over time, these lessons can be applied to the salary budget system as a whole.

The draft reform program envisages an eventual PFM system with all the desirable features of such pilot initiatives as the PAP. The detailed arrangements may change over time but the basic principle of priorities being reflected in budget allocations must remain in place. In particular, with the changes will come even greater decentralization of spending decisions to provinces, districts, communities and individual institutions. I trust that the PETS survey will yield a rich insight into how we may improve decentralized management processes and help identify key capacity gap in the system.

Once again, I would like to congratulate MOEYS for being, in many ways, a lead ministry in implementing more decentralized approaches to financial management and governance reforms. The establishment of around 200 decentralized Budget Management Centers and operational budgets for over 6,000 schools has meant that a large number of education staff now have greater authority over spending decisions. At the same time, the same people have more responsibility in ensuring that money is well spent and accounted for properly.

The increased delegation of responsibility to districts and schools has initiated a dynamic process of institutional reform and capacity building. More and more, education officials and staff are learning new responsibilities by the experience of doing and trying. This establishes a model for a rolling program of the best kind of capacity building which does not have to rely on the adoption of external prescriptions of what is best for Cambodia.

We are all aware of many of the current difficulties, especially ensuring that expenditure plans are realistic and that budget execution systems are strengthened. The reformulated draft PFM reform program is being deliberately designed to accelerate the rate at which things are improving. We have already begun to actively involve key line ministries in the broader PFM reforms decisions and this level of involvement will steadily increase. Clearly, the education ministry can bring very important perspectives and experiences to the PFM planning process and its phasing and sequencing. Similarly, the experiences of donors in providing a mix of sector budget support and investment projects will be incorporated into PFM reform planning.

This perspective has important implications for how we will take the broader PFM reforms forward. The program design allows for key ministries to continue to pioneer the way ahead and not to have to wait until every last ministry has caught up. For example, the introduction of policy-led education sector budget support from ADB and EC, negotiated with support from our two ministries, has shown that very positive results are possible without a perfect system. I would urge that the PETS analysis contributes to targeting important capacity gaps and system shortcomings here and now, rather than simply addressing an ideal system for the future. Because PFM reform is fundamental to the achievement of the Government's most important development strategies and policies, we must be ready to move ahead on the specifics as soon as possible.

The Government and my Ministry accord high value to the PETS initiative. First we expect it to identify immediate areas for making operational adjustments to existing financial management systems. Secondly, in the medium term, we will look to PETS to provide valuable insights into how we might best improve financial governance, especially measures to strengthen transparency and accountability of Government spending. In other words we want PETS to contribute to a phased and sequenced plan for institutional reform, especially for public accounting and internal audit. Once again, I am pleased that the education ministry has taken the initiative to establish its own internal audit procedures. PETS can help in suggesting ways of expanding internal audit procedures and how best to build further capacity.

Finally, I would like to emphasize that the PETS initiative must be viewed as a key step in the advancement of the Government's overall development partnership strategy. The implementation of the PETS initiative, including this initial workshop, must ensure our ownership and a shared commitment to any proposed PFM reforms. The PETS initiative can undoubtedly contribute to improving the success of broader Government and specific education reforms. At the same time, we must all be prepared to share potential risks and use initiatives such as PETS to judge these risks and help mitigate them.

Thank you.

## **Welcoming Remarks by H.E. Im Sethy, Secretary of State Ministry of Education, Youth and Sport, Royal Government of Cambodia**

Excellency Keat Chhon, Senior Minister and Minister of Economy and Finance, Royal Government of Cambodia

Mr. Etienne Clement, Resident Representative of UNESCO Office, Phnom Penh

Mr. Robert Talercio, Acting Director of World Bank, Cambodia

Distinguished Participants,

Excellencies, Ladies and Gentlemen,

It gives me great pleasure to make some welcoming remarks at this important course on Public Expenditure Tracking Surveys (PETS) in education being conducted here in Phnom Penh. First of all, on behalf of the Ministry of Education, Youth and Sport (MoEYS), Kingdom of Cambodia and on my own behalf, I would like to particularly thank His Excellency Keat Chhon, Senior Minister for agreeing to preside over the Opening Ceremony and make the keynote address.

I would like to extend a most cordial welcome to all the distinguished participants attending the course here today. I would also like to thank the various donor agencies and advisors contributing to the seminar over the next 10 days. May I wish you all a pleasant stay in Cambodia.

As some of you will know, the MoEYS is undertaking an ambitious process *of* education reform, focused on achieving Education for All as quickly as possible. Our key policy goal is to provide nine years of high quality basic education for all Cambodia's children by 2010. In order to do so, the Ministry recognizes the importance of establishing a wide-range of partnerships with other Government ministries and stakeholders and Cambodian civil society.

The Ministry's education reform process is guided by a comprehensive set of performance indicators and targets, including institutional, efficiency and financial targets. Clearly, in order to justify increased public expenditure on education, it is necessary for the MoEYS and MoEF to reach consensus on sector priorities and targets. Over the past few years, policy consultations between our two ministries have grown significantly and I have seen a growing common understanding on the purpose and value *of* the reforms. This is in contrast to the past when much of the discussions focus on narrower education activities and resources, with little dialogue on policy impact.

A number of important processes have been established to assist this increased focus on policy and strategy. Firstly, the introduction of the Medium Term Expenditure Framework (MTEF) has helped to provide a longer term perspective on allocating education resources. MoEYS has actively used this process in formulating its own medium term education expenditure plan and annual budget allocations. The introduction of the Priority Action Programs has also helped to better link education priorities with budget allocations. A number of inter-ministerial taskforces and committees have provided a forum for much more policy-oriented discussions on how best to use education resources.



Excellencies,  
Ladies and Gentlemen,

I am very pleased to state that many of these financial reforms are comparatively new in Cambodia. The PETS course being held here is an opportunity enabling the MoEYS itself to conduct the review and set up education development plans in accordance with the reform policy of the Royal Government of Cambodia. I anticipate that the PETS seminar will help Government staff, including the MoEYS participants on how expenditure tracking can provide important lessons on making sure education spending is effective. I hope that some of the international experiences discussed at the seminar will help to provide new ideas on optimizing impact. In particular, I hope to hear how best to ensure that education resources directly benefit students from the poorest families. In this context, I realize that a key feature of PETS relates to assessing the effectiveness of the flow of funds to schools and institutions and the management of these funds at various levels. As I said earlier, many of these financial reforms are still in the early stages of implementation. I cannot deny that there have been some difficulties and potential risks for the reform program. We have learned that the best way of solving these problems has been to share them with the Ministry of Economy and Finance and our development partners. A clear lesson we have all learned is that sharing the significant success of our reform program does require a willingness to share potential risks. I anticipate that the PETS surveys will help us to identify some of these risks as early as possible and put in place measures to solve them.

In conclusion, I would like to, once again, express my profound gratitude to H.E. Keat Chhon, Senior Minister and Minister of Economy and Finance for his gracious consent to officiate the opening of the PETS course.

To all participants, I would like to express my thanks and appreciation for their kind attendance and hope they will find their stay, here, in Cambodia both fruitful and enjoyable.

Thank you.

## **Welcoming Remarks by Mr. Etienne Clement, Representative of UNESCO in Cambodia**

H.E. Mr. Keat Chhon, Senior Minister and Minister of Economy and Finance,  
H.E. Mr. Im Sethy, Secretary of State, Ministry of Education, Youth and Sport,  
Excellencies,  
Participants,  
Ladies and Gentlemen:

I am very pleased to speak today on behalf of UNESCO on the occasion of the opening of the International Training Course on *Public Expenditure Tracking Surveys in Education*, organized by the UNESCO International Institute of Educational Planning (IIEP) and the World Bank Institute.

Achieving universal primary education, with all boys and girls completing a full course of quality basic education is essential for development. It is a Millennium Development Goal (MDG's) and we all know that the MDG's are the core of the development strategy in Cambodia. The organizer of this PETS course today are strongly committed to work together with Cambodia to achieve these goals.

Greater efficiency and accountability in the use of educational resources will substantially help to progress in the achievement of this MDG goal. In the framework of its major education plan (ESP), the Ministry of Education, Youth and Sports has given a particular attention to the monitoring of the decentralization of financial resource to schools and communities. The ministry has associated the donors in its efforts, through monthly meeting with the ESWG (Education Sector Working Group) and informed the donors regularly on its coordination with the Ministry of Economy and Finance.

Correct use of the resource with reduction of resource leakages and administrative inefficiencies constitutes a cornerstone in the education reform. *Public Expenditure Tracking Surveys (PETS)* are one of the tools to fulfill these objectives. Indeed, efficiency in spending, prioritization of resources allocations and accountability are key principles that will lead Cambodia's effort to reach high quality education, greater enrolment and completion. Positive impacts will follow, not only in education but also in other sectors in the country.

Let me finally congratulate H.E.Mr. Senior Minister Keat Chhon, Minister of Economy and Finance, H.E.Mr. Im Sethy, Secretary of State of the Ministry of Education, Youth and Sport, for this initiative and for associating UNESCO-IIEP and the World Bank Institute. I wish you success in this endeavor.

Thank you very much for your attention.

## Welcoming Remarks by Mr. Robert Talercio, Economist, The World Bank, Cambodia Country Office

Excellencies, Ladies and Gentlemen:

On behalf of Ms. Nisha Agrawal, Country Manager, Cambodia, for the WB, I would like to welcome you all to this international course on PETS. The WB, through its WBI, together with the International Institute for Education Planning, has organized this useful and timely course for a number of countries in the region and we are very happy to see that so many countries are participating.

Cambodia, together with its development partners, is in the forefront of public expenditure tracking in the region and has recently fielded a survey team to undertake the first PETS in Cambodia, focusing on the education sector. The Royal Government has assembled a multi-ministerial counterpart team, under the direction of Dr. Hang Chhuon Naron, DSG, MEF, to manage the work, together with an advisory team from the ADB, JICA, WHO, the WB, and CDRI, a local research firm that is implementing the PETS.

I thought it might be useful to say a few words about how the PETS work fits in with the bigger picture of reducing poverty. The WB's program of analytical and advisory activities in Cambodia is currently focusing on two central themes: (a) improving service delivery and (b) reducing the fiduciary risk to public funds. The *service delivery* theme is concerned with poverty reduction through higher quality and quantity service delivery, and focuses on pro-poor expenditure policy and better public expenditure management, including human resource management. The *fiduciary risk* theme centers on safeguarding public funds for their intended use. The Public Expenditure Tracking and Service Delivery Survey (PETS) squarely addresses both themes.

The conceptual framework for this work program is the "breaks in the chain" approach to service delivery analysis. Devarajan and Reinikka (2002) identify at least four breaks in the chain between budgets and desired service delivery: (a) spending on the wrong goods or people; (b) failure of funds to reach frontline service providers; (c) weak provider incentives for service provision; and (d) demand-side failures that prevent households from taking advantage of service provision.

These analytical and advisory services, taken together, will provide a well-rounded picture of constraints to improving service delivery quality and quantity in Cambodia. The 2003 *Integrated Fiduciary Assessment and Public Expenditure Review* (IFAPER) analyzed whether spending was generating the "right" goods to reach the "right" people by assessing public expenditure policy across government and within priority sectors-health, education, agriculture, and transport-and examining the extent to which the poor benefit from budgeted expenditure. The IFAPER also examined the civil service from the perspective of incentives for service delivery and effective management of human resources. Demand-side constraints have been analyzed in the education sector, which led to the development of a national scholarship program for the poor, and a more comprehensive survey is being conducted in the context of the preparation of the next phase of World Bank support to basic education. What is lacking is a systematic analysis of the second break in the chain-the flow of funds to frontline service providers – and a systematic strategy for addressing the fourth break in the chain-demand side failures, particularly those related to information access. The PETS is necessary to fill in the missing pieces of the service delivery story, and at the same time is important for addressing fiduciary risk.

The appeal of the PETS approach is strengthened by the possibility of fostering greater transparency – and thus accountability – in public service delivery. The PETS will generate information of great interest to the intended beneficiaries of government policy. Strengthening citizens’ ability to engage on service delivery issues would increase demand for more effective and efficient service delivery. The PETS is well placed to serve as a vehicle for the Government to engage citizens and civil society groups by bringing them into the service delivery process so that they may become effective voices for ensuring accountability in the use of public funds. This would mean that the PETS should include beneficiaries at key stages in the process and be widely disseminated and discussed at the local and national levels.

The IFAPER shows that, in recent years, the RGC has made progress in public expenditure policy—namely, increasing funds allocated to priority sectors such as education and health, and, in a number of instances, in boosting the efficiency, effectiveness, and poverty focus of these expenditures. Moreover, as the IFAPER indicates, it is important to note that the PETS is being undertaken in the context of progress toward reform in public financial management. The RGC has placed public financial management (PFM) reform squarely on its development and poverty reduction agendas and MEF is now finalizing a consolidated, sequenced, and costed PFM reform program, which will enable it to move forward systematically and in a way that allows for full coordination among its development partners.

In closing, I would like to reiterate that the WB, as well as many other development partners, regard expenditure tracking surveys as useful and flexible tools for diagnosing PEM systems. Moreover, embedding these surveys in the context of system-wide reform initiatives is important for ensuring a sensible and coherent approach that informs the overall reform program. Our best wishes to all the participants for a highly useful and productive course.

Thank you.

## MEMBERS OF THE COURSE FACULTY

**Jacques Hallak** is former director of IIEP, former ADG of UNESCO, and author of numerous articles and books dealing with different aspects of educational planning, economics of education, education management and international cooperation. For the past three years he has been actively involved in the IIEP program in “Ethics and Corruption in Education”.

**Ivo Njosa** is Data Management Specialist in the World Bank's Development Economics Group [DECRG]. Prior to, joining the Bank in 2002, he worked as as data management specialist with Macro International of Calverton, Maryland and Africa Region data manager for the World Bank. He holds a Masters Degree in Information Systems.

**Abel Ojoo** is an economist and statistician by training. He is managing director of Management Systems and Economic Consultants, Ltd., and Technical Advisor on decentralization to the Uganda Ministry of Education. He participated in the first PETS undertaken in Uganda in 1996, and he is currently involved in the QSDS and Community Report Card Survey in Uganda.

**Muriel Poisson** is program specialist at the IIEP and is responsible for research and training activities relating to Education for All. At the same time, she is the task manager of the IIEP program in “Ethics and Corruption in Education”. She has co-authored a number of documents published by IIEP on “education for disadvantaged groups”.

**Ritva Reinikka** is research manager in the Development Research Group of the World Bank and co-director of the *2004 World Development Report: Making Services Work for Poor People*. She pioneered the first PETS in Uganda in currently works on applied research on public services, including education and health. She is author of *Public Expenditure Tracking Surveys in Education* [IIEP, 2004].

**Mioko Saito** is a Programme Specialist at the IIEP. She holds a PhD in Educational Psychology from the University of Oklahoma in the USA. She has lectured in university courses associated with instructional design and development, media and technology in teaching, and visual literacy. At the IIEP she is currently involved in training and research programmes concerned with the design and implementation of large-scale educational policy research studies as well as the design of management information systems for educational planning. She is a co-author of several IIEP reports on the quality of education in countries in Southern and Eastern Africa, which have formed the basis for her current study of gender differences in literacy and numeracy levels at the upper end of primary schooling.

**Donald Winkler** is Senior Research Economist with RTI, International, and consultant to the World Bank Institute. He works on issues of education finance and management and has written widely on education decentralization. He has recently provided technical assistance on education decentralization in Armenia, Bulgaria, Indonesia, Pakistan, Peru, and Serbia. Prior to joining RTI in 2002, he managed the World Bank's Latin America Education Group and was Professor of Public Policy at the University of Southern California. He holds a Ph.D. in economics from the University of California, Berkeley.

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2	Mr.	Sreang	Limsroy	Cambodia	Ministry of Economy and Finance
3	Mr.	Ker	Chantheaborirak	Cambodia	Ministry of Economy and Finance
4	Mr.	Hav	Ratanak	Cambodia	Ministry of Economy And Finance
5	Mr.	Chhun	Chanthou	Cambodia	Ministry of Education, Youth and Sports
6	Mrs.	Kuy	Phala	Cambodia	Ministry of Education, Youth and Sports
7	Mrs.	Soeur	Socheata	Cambodia	Ministry of Education, Youth and Sports
8	Mr.	Somaly	Tek	Cambodia	Ministry of Education, Youth and Sports
9	Mr.	Yoeun	Thach	Cambodia	Ministry of Education, Youth and Sports
10	Mr.	Neang	Phouty	Cambodia	Ministry of Education, Youth and Sports
11	Mr.	Sok	Roath	Cambodia	Ministry of Education, Youth and Sports
12	Mr.	Sok	Tha	Cambodia	Ministry of Education, Youth and Sports
13	Mr.	Yinsieng	Someth	Cambodia	Ministry of Education, Youth and Sports
14	Mrs.	Khan	Kunthea Kalyan	Cambodia	Ministry of Health
15	Dr.	Youk	Sambath	Cambodia	Ministry of Health
16	Mr.	Bun	Sokhon	Cambodia	Ministry of Health PETS Working Group
17	Dr.	Te	Kuyseang	Cambodia	Ministry of Health PETS Working Group
18	Mr.	Prima	Setiawan	Indonesia	Research Triangle International
19	Mr.	James	M. Kirigwi	Kenya	Ministry of Education, Sciences & Technology
20	Mr.	James	K. Mugambi	Kenya	Ministry of Education, Sciences & Technology
21	Mr.	Philip	G. Ndungu	Kenya	Ministry of Education, Sciences & Technology
22	Mr.	Jason	N. Akoyo	Kenya	Ministry of Finance
23	Mr.	Zacharia	Mwangi Chege	Kenya	Ministry of Planning and National Development
24	Mr.	Pasomphet	Khamtanh	Lao PDR	Ministry of Finance
25	Mr.	Manivone	Phonh-Amath	Lao PDR	Ministry of Finance
26	Mrs.	Kham Phay	Vithasay	Lao PDR	Ministry of Finance
27	Mr.	Nilandone	Sayyaphet	Lao PDR	Ministry of Finance
28	Mr.	Swady	Kingkeo	Lao PDR	Ministry of Health
29	Mr.	Phantong	Buasavan	Lao PDR	Ministry of Health
30	Mr.	Niphonh	Manoukoune	Lao PDR	Ministry of Education
31	Mr.	Vimonh	Sisouva	Lao PDR	Ministry of Education
32	Mr.	Khamphanh	Chaleunphonh	Lao PDR	National Statistical Centre
33	Mr.	Bounmy	Vilaychith	Lao PDR	National Statistical Centre
34	Mr.	Nisith	Keopanya	Lao PDR	Prime Minister's Office
35	Mr.	Sengaloun	Nhotleuxay	Lao PDR	Prime Minister's Office
36	Ms.	Uranbaigali	Baasan	Mongolia	Ministry of Finance and Economy
37	Mr.	Tsolmon	Ariya	Mongolia	Ministry of Science, Technology, Culture and Education
38	Ms.	Tumendelger	Sengedorj	Mongolia	Mongolia University of Education
39	Mrs.	Enkhtuya	Natsagdorj	Mongolia	Mongolian Foundation for Open Society
40	Mrs.	Elbegsaikhan	Luvсандорж	Mongolia	National Statistical Office of Mongolia
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