Training Workshop on Education Policy Formulation & Monitoring

UNESCO Bangkok

May 27th–31st, 2013
Introduction to Education Simulation Model Exercise

Education Policy and Reform Unit
Outline of presentation

1. Examples of using simulation models
2. What do we need to know about simulation models?
3. Introduction to the exercise
Examples of using simulation models

Part 1
Various simulation models exist

* ANPRO (Analysis and Projection Model; Lao PDR, Vietnam and Cambodia)
* EPSSim (Education Policy and Strategy Simulation Model; Mongolia, Nepal, Uzbekistan etc)
* UNESCO Pole de Dakar model / World Bank model
* And so on....
In sum: why use simulation modeling?

* Simulations are used in education planning to:
  - enhance knowledge and identify bottlenecks
  - “explore” the future
  - help design policy and strategies
  - estimate resource implications

* They offer a range of benefits, including:
  - facilitating a sector-wide perspective
  - boosting the credibility of the planning process - GPE
  - assisting in negotiation with stakeholders on policy, resourcing and trade-offs
What do we need to know about simulation models?

Part 2
How models are constructed

PART 3

Population

Intake, registration and flow rates

Enrolments at each education level

Teachers and other staff

Buildings and equipment

Instructional materials

Yearly recurrent and capital cost projections
What kind of information is used

1. **Baseline data**
   * Demographic data
   * Macro-economic data
   * School, pedagogical data

2. **Policy assumptions and targets**
   * Enrolments (including intake and flow rates)
   * Educational personnel and materials use (including utilisation rates and student/teacher ratios)
   * Financing (including unit costs)

3. **Projection results**
   * Educational outputs
   * Financial implications
How simulation models are used

1. Simulation results can be used for stakeholder discussion

2. Different stakeholders can use simulation models to develop and justify their policies

3. Simulation models can produce different “scenarios” for further discussion & fine-tuning

4. Simulation models are not “black box”
Part 3

Introduction to the exercise
1. A simplified simulation model (primary education only) will be used

2. The participants will review the model together and analyze the “status-quo” scenario and “improved student flow rates” scenario

3. Role-play I: the participants will be asked to work in small groups, each of them with specific roles assigned (e.g., MoF, MoE, teachers etc). Each group will use the simulation model to develop their costed scenarios
4. Back in plenary, each group will present their scenarios, reflecting the group interests

5. Role-play II (policy discussion): participants will form new groups, this time each group consisting of 5 different stakeholders. Each group will develop a new scenario that can satisfy all stakeholders in the group

6. The participants get together in plenary once again, present scenarios and develop one “optimal” scenario
Role-play

5 stakeholders:
* Ministry of Finance
* Ministry of Education
* Development partners
* Teachers’ Union
* Parents’ Representative
Common conditions

* Please do not change “baseline” in column B
* Ensure to achieve universal primary education by 2015 (i.e., gross enrolment rate of 100%)
* Ensure that the average annual financial gap for the next 10 years will not exceed 20%
  * Ensure that in 10 years, the financial gap in the recurrent cost will be 0%
  * Ensure that the share of primary education to the total education budget will not exceed 25%
* You cannot manipulate the GDP growth rate
THANK YOU and ENJOY!