

### 5. Policy Simulation in Education Development Planning

In the context of strategic planning, computer -based policy simulation is widely used when preparing education sector development plans, as a tool for policy formulation, planning and resource projections. Since there are too many actors, interests and the interrelations between these in the education sector, it is necessary to have not only a reliable information system, but also an objective forecasting tool to facilitate policy consultations regarding financial constraints and their consequences on education and national development. Simulation is a tool *par excellence* for scenario planning. It is used to test the viability of an education development strategy and to propose alternatives that can help cope with dynamic and changing environments.

Policy simulation makes use of computer modelling techniques to anticipate and assess the consequences of education policies. Since early 1980s, UNESCO's upstream support has given priority to policy analysis through computer simulation in response to countries' increasing financial constraints, and to shifting international cooperation approaches and patterns from project to sector-wide policy support. UNESCO designed various education policy simulation models, with a view to supporting national education administrations in the design of medium and long-term education policy and strategies. These models have been conceived to provide methodological and technical support to education planners and specialists in their efforts for the formulation of credible education development plans and programmes.

The simulation method is increasingly used in developing countries as a strategic planning and management tool allowing for policy- making, informed policy dialogue and resource negotiation for education development. The scenarios, produced through simulation as results of a long process of trial and error by taking into consideration the policy options and the technical feasibilities as well as the financial constraints, can feed into constructive policy and social consultations about the perspective of education development and help design a comprehensive financial framework.

Policy simulation contributes to ensuring coherence in educational planning, a better understanding and consideration of the implications of the policy decisions, and holistic educational development, through the following process:

- First, the simulation serves the formation of educational policies, which is complex by nature. A simulation model can contribute useful information to evidence-based policy dialogue and consensus building. It is used as a tool for testing the feasibility of reform or development options of the sector. It allows, at the preliminary planning stage, to anticipate the pedagogical, physical and financial implications of the goals and policy options retained for long-term periods, thus contributing to designing feasible and coherent policies.
- Second, the simulation model provides indications on actions, inputs and resources required for educational development. It is used as a forecasting tool following the adoption of sector reform and/or development options. It makes it possible to determine the pedagogical, physical and financial implications of educational objectives. As a systemic forecasting tool, it helps in considering the dynamics of the educational system and the detection of the interrelations of a number of parameters which influence the operation and the improvement of educational services.
- Third, as early as the plan's preparation phase, the simulation can make it possible to establish an upstream forecast of recurrent expenditures and investments for the education sector in accordance with policy orientations. Governments, as a result, can have advance information on the annual costs required to implement the reform and development plans, foresee the budgetary gaps in relation to the possibility of States' financing in a given period, and identify the fields for which additional resources should be sought from the national private sector and/or from external partners.