Distance Education Programme on Education Sector Planning

Module 3

Education Sector Diagnosis
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Welcome to Module 3 “Education Sector Diagnosis” of our distance education programme on Education Sector Planning.

Many countries rely on rather comprehensive diagnoses or ‘situational assessments’ of their education sector as a basis for the formulation of educational plans and policies. You may have noticed from your own work experience over recent years that Education Sector Diagnosis (ESD) has become even more important since many governments and aid agencies have moved towards a more sector-wide approach to planning and external programme and budget support in education, often associated with more and regular reviews and assessments of the education sector and its achievements.

In this Module 3 you will gain an insight into the objectives, contents and commonly applied analytical framework of Education Sector Diagnosis and learn how to apply the method and tools of ESD for the diagnosis of concrete cases, including that of the education sector of your own country.

This Module is composed of 6 Units on a range of crucial ESD-related themes.

**General Objective:**
Module 3 aims to provide you with the basic knowledge and technical competency required to participate effectively in future diagnoses of the education sector in your country.

**Course content:**
- Main objectives, actors and stages of Education Sector Diagnosis;
- The Analytical Framework and context analysis applied in ESD;
- Analysing access, internal efficiency and equity in education;
- Analysing quality of education and external effectiveness;
- Analysing the cost, financing and management of education;
- Synthesizing ESD results and identifying priority problems.
Expected learning outcomes:
Upon completion of Module 3 you should be able to:

• understand the concept, role and usefulness of an Education Sector Diagnosis (ESD) in
  the context of Education for All (EFA), sector-wide and inter-sector strategies and plans
  for educational development;
• determine the scope and content of an ESD according to its specific context and purpose;
• critically discuss concrete examples of application of the analytical framework of an ESD;
• understand and discuss the main analytical tools and indicators used in an ESD;
• identify and interpret relevant data and information that have to be mobilized for the
  purpose;
• synthesize the main results of an ESD;
• identify the priority problems for the development a country’s education sector on the
  basics of the results of the ESD.

Timeframe:
• This module will be held from 26 April to 11 June 2010.
• The study time required for this module is approximately 8 hours per week.

Need help?
The module instructors are Gabriele Gottelmann and Lars Mahlick. They will be in touch with you
via the e-learning platform, providing you with information and guidance about the weekly
activities you should prepare, and the deadlines for the submission of your group activities. They
will also be in charge of evaluating your answers to your group activities as well as your individual
examination.

In case you have any specific questions or certain difficulties in understanding the material or
work instructions related to this module, you should first of all contact your country Group
Coordinator who will assist you in addressing them. In case certain specific questions or
difficulties remain open, the IIEP module instructors will be happy to address any further
questions in a special session organized at the end of the module.

Questions for individual reflection:
• While reading the materials relating to the present module, you will regularly come across
  ‘Questions for individual reflection’. Reflecting on and responding to these questions will
  help you to clarify whether you have understood certain relevant parts or aspects of the
course contents; in some cases, these questions will also encourage you to analyze, in
connection with the presented explanations, the processes or certain technical aspects
of how to apply the contents to the elaboration of the diagnosis of the education sector in
your country.
Firstly, we suggest that you answer each of these questions individually and take short notes of your answers. Then, compare and discuss your answers and possible doubts with your colleagues during the weekly sessions organized by your Group Coordinator.

The questions for reflection will not be marked. You will not have to submit your responses to the IIEP module instructors. The objective of these questions is to improve your understanding of the material and prepared you for the individual examination as well as for the preparation of your country paper. Therefore, it is important that you prepare your answers to these questions and participate in the weekly sessions organized by your Group Coordinator.

**Group Activity:**

- Related to each Unit of Module 3, you will find at the end of the Unit a Group Activity. For the preparation of the group response, we suggest that you start reading the material and answering the activity individually. Then, compare and discuss your answers and points of view with your colleagues during the group sessions organized by your Group Coordinator. Finally, your group should prepare a consolidated group response for each group activity.

- Your Group Coordinator is expected to submit the group response to the course instructors at the IIEP Paris on or before the indicated deadline. The submission of the group responses is compulsory and will be also considered as a preparation for the individual examination and the elaboration of your country paper.

- The group responses to the activities will be marked by the IIEP course instructors. Within one week after your submission, your group will receive an assessment report containing the instructors’ comments and remarks on your work as well as a group mark.

**Assessment:**

- **Assessment of group activities:**

  Related to each unit of Module 3 your group will work on certain Group Activities, as indicated above (these group activities mainly consist of questions to be discussed and answered by the group) and prepare a Group Report/Group Response that will be evaluated and marked by the IIEP course instructors in Paris.

- **Assessment of individual achievements:**

  At the end of June 2010 you will pass an individual written exam to assess your learning achievements relating to this module (together with Modules 1 and Module 2). The exam referring to the course contents of Module 3 will consist of a set of questions requesting short answers. Your individual attendance and participation in the module will be assessed by your Group Coordinator.
Readings:

In addition to the IIEP course materials on Module 3, we strongly recommend you to read the following documents which are available on the programme e-learning platform:

UNIT 1. EDUCATION SECTOR DIAGNOSIS: CONTEXT AND
OBJECTIVES, MAIN ACTORS AND STAGES

In Unit 1 we shall deal with the concept and objectives of an Education Sector Diagnosis (ESD) as well as some of its major organisational and implementation aspects.

Unit 1 is divided into three parts:

**Part 1** defines the ESD concept and explains why sector diagnosis is extremely important for the preparation of national plans and policies. It places ESD particularly in the current context of Sector-Wide Approaches (SWAs), and planning for educational development [e.g. ten-year plans, Education For All (EFA) plans] and of inter-sectoral strategies, such as poverty reduction.

**Part 2** sets forth the principal actors and organizational aspects of Education Sector Diagnosis.

**Part 3** gives an overview of the main methodological steps usually followed in carrying out an education sector diagnosis.

**Unit objective:**

Unit 1 aims to foster your understanding and critical discussion of the concept, current purposes and some major organizational and implementation aspects of the Education Sector Diagnosis (ESD).

**Unit content:**

- Definitions, Current Context and Objectives of Sector Analysis and Diagnosis of the Education Sector;
- Actors and Participation Models;
- The Main Practical Steps of the Education Sector Diagnosis Process.

**Expected learning outcomes:**

Upon completion of Unit 1 you should be able to:

- define the concept of “education sector diagnosis”;
- identify and describe the main objectives and expected contributions of Education Sector Diagnosis (ESD);
• evaluate the utility of a comprehensive Education Sector Diagnosis in the context of sector-wide and inter-sector plans and strategies;
• explain the main possible benefits and implications of involving stakeholders and other actors in the preparation of ESDs and education sector strategies;
• identify the main sources of relevant data and information for ESD and major possible problems relating to the use of the latter in this context.

**Timeframe:**
- The group study time required for this unit is approximately 8 hours per week.

**Questions for individual reflection:**
- In this unit, you will be asked to answer individual questions for reflection in connection with the content of Part 1.

**Group Activities:**
- At the end of the unit, you will work with your colleagues on a group activity related to Part 2 and 3. This activity was specially designed to help you to consolidate your understanding of the main themes and aspects covered in this unit.

**Reading:**
In addition to the present document relating to Unit 1 of Module 3, we strongly recommend you to read the following documents which are available on the ESP programme e-learning platform:

PART 1. DEFINITIONS, CURRENT CONTEXT AND OBJECTIVES OF SECTOR STRATEGIES AND DIAGNOSIS OF THE EDUCATION SECTOR

1.1 Education Sector Strategies and Education Sector Diagnosis

An *Education Sector Strategy* needs to:

- Assess the way in which the education system responds to the needs of the population and contributes to educational development; and
- Determine coherent objectives, as well as ways and means for the sector’s future development.

An Education Sector Strategy should build on a detailed *diagnosis*. Referring to the diagnosis of past trends and the current situation and constraints on the one hand and the policy objectives set for the future development of education on the other; it is also necessary to establish a *prognosis* in order to define a future strategy and programmes for the sector; the design of *action plans* and/or *projects* constitutes a third major dimension of an Education Sector Strategy:

An *Education Sector Diagnosis (ESD)* is a critical examination of the status, functioning and results of the education system, designed to identify its strengths, weaknesses and opportunities for improvement.

The terms ‘diagnosis’ and ‘prognosis’ derive from Greek:

*DIA* (through) and *GNOSIS* (knowledge)       *PROGNOSIS* (knowing before)

The essential goal of ESD is to acquire as much knowledge as possible of a country’s education system, with all its components (from pre-school to higher education, including both formal and non-formal adult education). A sound diagnosis of the education sector includes an interpretation of the prevailing trends and an attempt to identify the major problems and constraints affecting educational development.
In an *Education Sector Diagnosis (ESD)* the state of the education system is evaluated from eight main perspectives:

<table>
<thead>
<tr>
<th>Context</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>External efficiency</td>
</tr>
<tr>
<td>Equity</td>
<td>Costs and financing</td>
</tr>
<tr>
<td>Internal efficiency</td>
<td>Management</td>
</tr>
</tbody>
</table>

Analysis of recent educational policy and reform is an important aspect of any ESD, owing to the fact that it makes it possible to (i) judge the coherence of educational policy objectives and assess their relevance to the social, economic, cultural and political situation of the country concerned; and (ii) evaluate the degree to which the education system attains its objectives, and the efficiency with which it does so.

However, the analysis and formulation of sectoral strategies is not only a technical exercise, but also a *delicate political and social process* that should pave the way for reform and significant change.

### 1.2 Why undertake an Education Sector Diagnosis? - Rationale and Context

*Under what circumstances is it appropriate to undertake the considerable effort involved in this type of comprehensive strategic analysis?* Simplifying the matter somewhat, an answer can be proposed at two levels:

- First, any policy and any educational development plan should be based on systematic and in-depth comprehension of the realities and challenges facing the education system and, therefore, sector analysis is indispensable for this purpose.
- Second, particular circumstances often generate a need for a comprehensive review of the sector, as well as national dialogue on a new educational development strategy; this is the case when the *country context* is characterized, for example, by serious imbalances (financial or other); political, economic and social change and crisis; post-conflict situations, etc.

Since the 1960s, the situation in many developing countries has warranted a review and redefinition of *educational policy and strategy*. A great number of these countries have received international aid to develop their education sectors, and have been requested to *provide a rationale for investment in the sector by means of thorough analyses and proposals for comprehensive and coherent strategies*. According to Runner (2004): “The practice of sector analysis – or what took its place – has always been upstream from development projects”, even if the context and operational framework have changed to some degree in recent years.

### 1.3 Recent changes in context and needs

Until the late 1980s and early 1990s, aid for educational development generally took the form of *projects*. Sector analysis, which was then commonly called “context analysis” or “environmental analysis” was a prerequisite for multilateral organizations, World Bank, UNDP etc. and bilateral...
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funding agencies, in defining and preparing projects. Subsequently, there was a gradual move from the "project approach" to the "sector approach"

1.3.1 Shift from the “Project Approach” to the “Sector Approach”

The “sector approach” reflects an awareness of the limitations of partial interventions by specific projects focusing on selected areas or aspects (e.g. teacher-training or textbooks) and usually lasting a relatively short period of time (2 to 4 years). Thus, the goal became one of gaining a more comprehensive view of the problems in the sector (or in one of its sub-sectors, such as technical and vocational education) and of possible solutions, generally in the framework of a five- or ten-year plan or programme for educational development.

When the project approach was used, the education system itself was considered as part of the “context”. It has now become a field of investigation in its own right and the operational framework has changed in several ways in most countries.

The need to place not only the problem analysis approach, but also the ensuing action (investment programmes, action plans etc.) in a global and coherent perspective, has become increasingly urgent with a multiplication of actors involved in decision-making on educational development. The design and implementation of a coherent educational policy is actually quite complicated in countries where development co-operation agencies and national actors (private sector, decentralized government, nongovernmental organizations, etc.) working in the sector are numerous and, often, influential (Runner, 2004). Thus, it has become imperative to create adequate mechanisms and procedures for co-ordination, in order to harmonize investments in education from different sources.

Over the last ten to fifteen years, a “sector-wide approach”, or SWAp, has been applied in many instances for education sector interventions. A number of definitions of SWAps can be found in existing documentation (see: Module 1). For the purpose of this module, the following working definition is used:

The Sector-Wide Approach (SWAp) means that all significant funding for the sector supports an integrated policy and expenditure programme, under government leadership, adopting common approaches across the sector, and progressing towards relying on government procedures to disburse and account for all funds. (Foster, 2000)

In the broad, original sense of the term, analyses of educational development using a “sector-wide approach” should identify trends and predict future development in the education sector as a whole and in its various sub-sectors (primary, secondary, higher education, adult education, etc.) in order to gain a better understanding of their inter-relationships and define a coherent strategy for the redistribution of resources among them.

In practice, however, a “sector-wide approach” is also sometimes invoked when deciding on a strategy and programme focused on a specific sub-sector, such as primary or secondary education. These sub-sector programmes, however, should be related to, and designed in a coherent, common framework.
The national Education For All (EFA) plans, which have been prepared in many developing countries, particularly as a follow-up to the World Education Forum in Dakar in 2000, can be considered as examples of sub-sector plans based on a “sector-wide approach”.

A SWAp comprises a sector plan, a budget and an implementation plan. An ESP under SWAp involves harmonisation of the sector financing system and typically requires a Medium-Term Expenditure Frameworks (MTEF) that links planning to resource allocation from a longer term perspective (3-5 years). The MTEF is a multi-year public expenditure framework and is used to set out the future budget requirements (with a 3 to 5 years rolling horizon) for the services provided by Government overall and sector ministries. The MTEF aims at achieving better internal coherence of sector spending while strengthening the links between targets, investment and actual results in the development of education. This is why an MTEF is typically a pre-condition for support by donor organizations to Government budgets.

To ensure that programmes and interventions (financial and other designed to develop the education sector are consistent, governments often make a single central agency (Ministry of Finance, National Planning Commission, etc.) responsible for overseeing the relationship between the programmes in a number of countries. Uganda’s education sector programme provides an early example of a multi-sectoral approach not directly under the control of the Ministry of Education.

1.3.2 The sector-wide approach to educational development within the framework of inter-sector strategies

Intervention for educational development has also moved further towards an inter-sector approach. Indeed, the Millennium Development Goals (MDG), as defined in the United Nations Millennium Declaration of September 2000, placed education and, more specifically, universal primary schooling, among the major eight priority objectives for development (see: Module 1).

As has also been discussed in Module 1, the World Bank (WB), for its part, has declared the eradication of extreme poverty, the reduction of inequality and the improvement of economic and social opportunities in medium- and low-income countries as priority development objectives for the coming years. The World Bank also began advocating a Comprehensive Development Framework (CDF) emphasizing the interdependence of all aspects involved in development – social, structural, governance, economic and financial. (Wolfensohn & Fischer, 2000; World Bank, 2004).

Sector Diagnosis and Poverty Reduction Strategies

The ministers participating in the annual meeting of the World Bank in September 1999 decided that loans under concessional terms and the Highly Indebted Poor Countries (HIPC) initiative funds would henceforth be granted based on the beneficiary countries’ strategies to combat poverty. Many bilateral aid agencies also base their funding on such poverty reduction strategies.

In order to ensure the coherence of its anti-poverty strategy, the government of each beneficiary country works with the civil society to create a Poverty Reduction Strategy Paper (PRSP).

For Uganda’s Poverty Reduction Support Programme (PRSP), for example, the national government had to make financial commitments signifying that (i) a minimum of 31% funding for education be maintained, and (ii) that at least 65% of the total education budget be allocated to the primary education sub-sector.
All these trends and recent frameworks of international assistance to education have encouraged governments to conceive and plan educational development in a sector-wide perspective, integrate it in medium- and long-term national development planning, while giving particular emphasis to poverty reduction. Sector or sub-sector diagnoses (especially those focusing on basic education) are an essential element in preparing these strategic documents.

Questions for individual reflection:

Reflect individually on the questions below and prepare short notes of your answers. Please mind filing your notes very carefully below in order to have them available for Group discussions. Your notes will be particularly helpful when preparing the Draft *Introduction* to the Country Plan Document during the last phase of this Distance Education Programme in November/December 2010.

1. In what framework – in particular: Education For All (EFA); medium- or long-term sector development plans; Poverty Reduction Strategy Papers (PRSPs) etc. - and with what objectives, have Education Sector Diagnoses (ESD) been conducted *in your country during the last five years*?

2. To what extent does the review of (i) EFA Plans (ii) EFA-Fast-Track Initiative (FTI) proposal documents (iii) the Government’s (medium- or long-term) educational development plan/strategy build on existing Education Sector Diagnosis reports? To what extent is it necessary to generate new information and data for this purpose?
PART 2. ACTORS AND PARTICIPATION MODELS

2.1 Main actors

In any country, the education of children, young people and adults is an issue that directly concerns nearly all sectors of the population and numerous organizations, specifically:

- Students and their parents.
- Teachers (and teachers’ unions).
- Employers (and other special interest groups).
- Political officials.
- Education ministry and other agencies responsible for implementing educational policy.
- Other ministries (involved in human resources development).
- Local governments; and
- National and foreign funding agencies.

While recognizing the importance of the general objectives and goals of the education system (for example, offer a quality education relevant to the country’s needs) actors do not necessarily have the same concerns or interests. (e.g. parents and employers do not generally have identical views of what constitutes “high-quality education”).

Certain documents relating to the formulation of sector strategies and the preparation of sector diagnoses as a fundamental stage in this process distinguish the key actors who “make decisions that affect the sector or sub-sector” (i.e. policy-makers, funding and co-operation agencies) from those “directly affected by the decisions taken” (i.e. students, parents, teachers, local government, employers, etc.). Currently, sector-wide approaches encourage national dialogue with the main organized interest groups and social actors, and even with non-organized parties in civil society. This involves not merely informing, but also consulting with all concerned.

Consultation with a wide range of individuals across the population spectrum is now considered a necessary step in obtaining their support for implementing a new sector-wide strategy. It is also a requirement for any government with democratic aspirations. However, while it is now commonly recognized that a sector programme or plan should be based on broad social consultations, the advantages of bringing numerous actors and organizations into the process of conceiving and conducting analytical work must be weighed against practical considerations. If too many organizations participate, the steering committee and working groups for an ESD can become large and unwieldy, delaying completion of the sector analysis and the adoption and execution of consequential strategic plans and programmes.
Table 1. Examples of actors and organizations that are potential participants in a sector analysis of education

<table>
<thead>
<tr>
<th>Organizations involved in conceiving and implementing plans and programmes</th>
<th>Funding Organizations</th>
<th>‘Clients’ Civil Society</th>
<th>Oversight Organizations</th>
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<tbody>
<tr>
<td>*Ministry of Education:</td>
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<tr>
<td>- Preschool</td>
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<td>- Primary</td>
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<td>- Secondary (First cycle/Second cycle)</td>
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<td>- Vocational/technical education</td>
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<td>- Higher education</td>
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<td>- Non-formal/Literacy/Continuing Education</td>
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<td>- Administration</td>
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<td>- Planning, finance</td>
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<tr>
<td>- Personnel</td>
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<tr>
<td>*Research and Development Universities</td>
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<tr>
<td>*Teachers/Teachers’ Unions</td>
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<tr>
<td>*Non-governmental Organizations (NGOs)</td>
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<td>*Women’s Affairs</td>
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<td>*Young People</td>
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<tr>
<td>*Ministry of Industry (Vocational and Technical Education)</td>
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<td>*Bilateral Funders:</td>
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<td>- DFID</td>
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<td>- JICA</td>
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<td>- USAID</td>
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<td>- SIDA</td>
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<td>*Development Banks:</td>
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<td>- World Bank</td>
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<td>- African Development Bank</td>
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<td>- Asian Development Bank</td>
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<td>*International Organizations:</td>
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<td>- UNESCO</td>
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<td>- ILO, FAO</td>
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<td>- UNDP</td>
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<tr>
<td>- UNICEF, etc.</td>
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<tr>
<td>*Non-governmental Organizations and Foundations.</td>
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<tr>
<td>*Students</td>
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<tr>
<td>*Parents</td>
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<td>*Teachers</td>
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<tr>
<td>*Community leaders</td>
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<tr>
<td>*Religious Leaders</td>
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<tr>
<td>*Universities and other research and teaching institutions</td>
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<tr>
<td>*Disadvantaged groups, minorities</td>
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<tr>
<td>*Local Associations</td>
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<tr>
<td>*Inter-ministerial committee (social sector reform, decentralization)</td>
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<td>*Ministry of Finance</td>
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<td>*Ministry of Planning</td>
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<td>*Ministry of Education:</td>
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<tr>
<td>- Planning Department</td>
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<tr>
<td>- General Inspectorate</td>
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In practice, the primary organizer of sector analysis (e.g. ministries of education) must decide on the organization or person that will represent each of the partners in the process. The selection of representative organizations or actors and the decision about the composition of the committees or teams in which they will participate should, if possible, take place before the sector analysis begins.
2.2 Organizational approaches in the “technical” phase of the ESA/ESD

The organization of the “technical” portion of the sector analysis of education, i.e. the organization of the diagnostic and prognostic work, differs perceptibly from one study to another, particularly as regards duration and the extent to which the process is participatory. In order to clarify the difference between these, a description is given, below, of two extremes: the “top-down” approach and the “participatory” approaches.

2.2.1 The “top-down” approach

This approach features a funding or foreign aid organization that, either alone or (more often) in co-operation with national decision-makers and other agencies, initiates a sector study and commissions a team of high-level international experts to carry it out. This approach is certainly waning but is still often used in situations of emergency, where it is necessary to arrive quickly at an assessment of the situation and identify appropriate strategies and projects for the education sector.

The procedure followed under this “top-down” approach is as follows. After carefully determining the composition of the team of consultants, selecting its members and approving the terms of reference that define their responsibilities, the main organization involved begins to prepare the first (and sometimes only) mission, beginning by gathering basic information to support the field work.

The team, comprising of five or six consultants, then spend four to six weeks in the country, in order to analyze the situation in-depth. They begin by questioning ministers and government officials so as to quickly identify the major problems and guide their research. Based on these initial impressions, a trip throughout the country is organized. The consultants visit a large sample of enterprises, educational institutions and regional and local governments. They interview civil servants, inspect schools, speak with teachers, parents and employers, and then return to the capital to complete the information gathering phase of the work. During the rest of the mission, they spend their evenings (and even nights) entering data into their laptop computers, and constructing tables and charts. The daytime is devoted to further interviews with officials, in order to confirm the information gathered or obtain any missing information needed to calculate the necessary indicators.

Once this stage has been completed, the members of the team return to headquarters to prepare preliminary drafts of sub-sector reports, focusing on major problems, sketching the outlines for corrective policy, and putting into order the proposals advanced by the various participants. Approximately two months later, an intelligent, clear, direct, and sometimes incisive report is submitted to the government for comment, with a request for authorization to circulate the report. The proposals contained in the report are persuasive and are written in language easily understood by the international community. They are often used subsequently by financial donors to develop projects in collaboration with the country concerned.

This type of analysis of the education sector, though fast – and efficient, in the eyes of certain organizations – nevertheless entails a number of problems. The role of most of the national officials involved tends to be confined to assisting the international team on logistics and information gathering. If there is a policy dialogue, it is limited to a few senior decision-makers and officials.
2.2.2 Participatory approaches

At the other extreme one finds the “participatory approach”, or rather “approaches”, involving a variety of national and international actors – under the leadership of the government of the country concerned. These approaches have gained ground over the last decade, mainly due to the political democratization processes in many countries; at the same time it is more and more widely recognized that the implementation of new educational policies and projects is largely facilitated by upstream consultation of the social actors concerned.

The sector analyses produced in a “participatory” way involve a great number of actors, and are generally long-winded and costly. They require:

- Participation and work of qualified country staff for a period of about two years.
- Creation of interdisciplinary and inter-ministerial working groups to conduct field studies.
- Preparation of a substantial number of research documents and/or technical studies.
- Organization of several seminars.
- Consultations with persons at various levels of government (e.g. regions, districts, schools).
- Numerous discussions with political officials; and
- Consultation with teachers, parents, community leaders, etc.

The time required of outside consultants (technical assistance) may be greater than in the “top-down” approach, since their principal function is not to prepare reports, but to share their technical knowledge with domestic technical personnel and officials and to encourage them to provide innovative suggestions.

Although, from a technical perspective, the results of this approach may appear no better than the results of the first type of sector analysis, “participatory approaches” offer a number of advantages. They tend to produce new development strategies based on the perceived needs of the parties concerned; they reinforce a country’s capacity to analyze and execute policy in the education sector since many officials are involved and get the opportunity to broaden or strengthen existing skills in their areas of competence. At the end of the process, and above all, those concerned should have voiced their views and be convinced of the value of the proposals they have prepared. They have become better acquainted with others involved, and will not hesitate to consult each other during the execution of the resulting programmes or projects.

2.2.3 Intermediate approaches

In reality, sector analysis increasingly employs approaches located somewhere in between these two extremes. These intermediate approaches are both, based on a certain number of studies, conducted by national and/or international experts, and drawing on consultation/participation of the parties concerned. They often combine different types of training on site or abroad, and provide opportunity for the development of national capacities.
Organization of the Participatory Process in the Framework of EFA

“The way in which the ‘participatory process’ is organized depends on the political traditions of the country and its legislative and institutional frameworks. In many countries, the planning process always features the institutions at the central level and favours technocratic approaches. In these countries, the ministries of education should first involve other government institutions and actors at the central level in the preparation of an EFA plan. The outline of the plan is closely related to the material produced by these institutions, drawing on prior consultation with them, and subsequently serves as the basis for a broad dialogue with actors and interest groups. The use of a central inter-institutional planning framework during the implementation of the plan serves to legitimize and support inter-sector initiatives taken at the local level. In the long term, as subsequent plans are developed, this process encourages joint planning and broader participation by actors and interest groups”. (UNESCO, 2001)

In practice, the approach adopted to prepare sector analyses and sectoral plans depends on various factors, such as, the:

- Specific political context of the country.
- Traditions (administrative, cultural).
- Education system’s degree of centralization/decentralization.
- Legal framework of the consultation process.
- Availability of experts within the country.
- Staffing policy adopted for the preparation of the ESA and planning documents: for example the time during which these local specialists may be absent from their usual functions, incentives offered and stability within the organization.
PART 3. THE MAIN PRACTICAL STEPS OF THE EDUCATION SECTOR DIAGNOSIS PROCESS

3.1 Introduction

The implementation of an Education Sector Diagnosis the following four major steps (Kemmerer, 1994):

- Definition of/or recommitment to sector goals and objectives.
- Collection of relevant data.
- Analysis of problems, constraints and opportunities.
- Identification of priority problems and areas for improvement

The first of the four stages is usually based on national consultations and debates, and precedes the more technical parts of the ESD; objectives and targets for educational development are also generally reviewed and eventually adjusted once the diagnostic work has produced a better insight into the situation of the education sector and again after simulations and stakeholder consultations relating to possible policy options. The three other steps are of particular interest in the present Module (Module 3) and will therefore be briefly described below.

3.2 Information sources and data collection

Once the objectives, content areas and main aspects of the ESD have been determined, it is necessary to make a systematic evaluation of what data are already available, and to determine what additional information needs to be collected.

Since a sector diagnosis should provide a comprehensive picture of recent developments and the current state of the education system (conditions of access, pupils and students attending, teaching staff, the infrastructure, costs, learning results achieved, system performance) and also analyse the relationship between the education system and its societal it is necessary to dispose, in addition to the regularly collected statistics on education, a set of relevant data on demographic, financial and other aspects. Such data should be available from the central statistical office or census bureau and the (public) authorities concerned.

It is important that a sector diagnosis does not confine itself to the quantitative and statistical aspects only but also includes qualitative dimensions such as the teaching-learning conditions as perceived by teachers, and perhaps, by parents.
| Table 1(a). Examples of data collected and sources of information: statistical data |
|-------------------------------|---------------------------------|-------------------------------------------------|
| **Aspect**                   | **Data/Information**            | **Sources of information**                      |
| Finance                      | Overall government budget; Budget of education sector. | Ministry of Finance; Ministry of Education. |
| Education                    | Access to basic education; Enrolment at different levels of education; Illiteracy. | Yearly school census and other data collected regularly by the Ministry of Education. |

| Table 1(b). Examples of data collected and sources of information: qualitative information |
|-------------------------------|---------------------------------|------------------------------------------------|
| **Aspect**                   | **Data/Information**            | **Sources**                                    |
| History and Culture of Country | Main historical events; Ethnic composition of population; Religions; Languages and dialects. | Data archives; Scientific articles, information sheets of the Ministry of Foreign Affairs. |
| Literacy                     | Evolution of literacy.          | Literacy and adult education plans/programmes. |
| Education                    | Curriculum, extra-curricular activities; Instructional methods. | Research Studies of National Institutes; University research departments; NGOs. |
|                              | Attitudes to education among recipients and stakeholders. | Surveys, Consultations. |
3.2.1 Collecting existing information

An ESD has to start with a systematic assessment of the information already available in the area to be studied and a weighting of the additional value (in terms of better accuracy and understanding of the educational reality) of using or re-processing existing data versus the additional cost and other implications for gathering new data and information.

The statistical yearbooks and the yearly school census do constitute the main sources of information on the evolution of a country’s education system. Studies and reports of micro-planning/school mapping may also offer valuable information on the current state of the primary, technical-vocational education, etc.

In all education systems there is a plethora of information, from teacher records and inspection reports to research papers by university scholars. However, such records and reports are often difficult to access. When available, the data/information have to be checked, sorted, processed, and interpreted for the needs of the ESD. Likewise, data and information existing in other sector ministries and authorities should be carefully reviewed before being retrieved and used. Inquiries would include the following elements:

? How current are the data? Do they allow for trend analyses and projections?

? To what extent are they accurate, and relevant, to the different users of information on education?

? At what level are the data aggregated? What data are available at the national level only, and what data exist at the provincial, district, and local levels?

? To what extent are relevant data available on minorities or disadvantaged groups, and broken down by significant variables such as age group, gender and so on?

In many countries, ESD sector or sub-sector studies have already been carried out in the recent past. Sometimes, they may not be readily accessible for different reasons; it is also important to know the outcome of previous research work since duplication of data collection tends to create frustration and, perhaps, carelessness among those who are repeatedly requested to provide data.

3.2.2 Seeking out new information: the scope and instruments

Once the additional information to be collected has been determined, those carrying out an ESD will have to choose from a range of methods, techniques and instruments (e.g. observations, interviews, surveys, and studies) the most appropriate ones to supplement existing data.

To evaluate the long-term outcomes of schooling and explain “why” the changes in system performance have –or have not– occurred, require “specially designed studies”.

For instance, survey by questionnaire constitutes an appropriate method for collecting data on the external effectiveness of education, e.g. the career and employment of school leavers and graduates. However, decisions have to be made as to whether to trace the educational and professional career of selected school leavers/graduates or to investigate a sample of employers (and perhaps also community members). Usually time is too short for conducting such tracer studies within a sector diagnosis, and that is why most ESDs try to use results from existing research. On the other hand, employer surveys instigated by ESD teams are rather common.
Observational studies conducted by trained investigators are usually necessary to generate relevant and reliable information on classroom realities. For instance, observations and recordings of teaching-learning methods used, and the real time (“time-on-task”) spent by teachers on different topics and instructional activities, give more precise and consistent information than the sole use of questionnaires to teachers and heads of school. However, systematic classroom observation is an expensive method both in time and expertise; therefore, in practice, it tends to be used mainly when designing curricular reforms or major innovations, which may or may not coincide with the work undertaken in a sector or sub-sector analysis.

Instead of collecting data on the entire population concerned, it is generally preferable to employ representative samples of students, teachers etc. A well-designed sample survey can generate data for decision-makers that are as relevant as those produced by a full-scale survey but at a much lower cost.

In the case of a large-scale sector analysis, it is worthwhile choosing a set of survey sites which are common to all the specialists of an ESD and which cover a range of different environments (e.g. a sample of schools of different sizes, located in rural and urban areas etc.). If carefully coordinated, this approach not only saves money, but also makes it possible to compare and combine, for example, data on system costs, socio-economic information pertaining to the same geographic entity and information from schools, parents or teachers living in the same region.

3.3 Processing and analyzing the information

As regards data processing various kinds of activities are necessary before it is possible to interpret and present the results. These include:

- Drawing up tables.
- Establishing time series.
- Aggregating or disaggregating data.
- Estimating.
- Calculating relations.
- Computing means, standard deviations, growth rates, indicators of all types.
- Revealing trends.
- Making comparisons.
- Preparing graphic or cartographic representations.

To help the users of the ESD report to assimilate the crucial messages and findings, the main results of the analyses are summarized in statistical tables, graphics and cartographic representations. The basic rule in reporting to key decision-makers is to produce a maximum of information by a minimum of indicators. Graphic representations easily illustrate the general evolution of the principal indicators (thus particularly suitable for time series), and will give the reader “at a glance” the central characteristics of the analyses done and the results achieved.

Combining different data and presenting the results of the analyses in the form of cross-tabulations is essential: e.g. to provide enrolment rates by gender, the pupil/teacher ratio by region. For the information needs of central level decision-makers, indicators on students and
teachers are usually calculated and presented by province or region, and disaggregated by
gender, by geographical localization (urban/rural) and type of institution (public/private). When
preparing an ESD report it is crucial to identify possible shortcomings of the data used, such as
lack of reliability and comprehensiveness; inconsistencies of data stemming from different
sources etc. Such weaknesses should be addressed as far as possible in the framework of the
ESD work; if not they need to be made explicit.

3.4 Synthesizing the problems identified and proposing roads to improvement

In large-scale sector studies, the documentation accumulated is often too voluminous, the
identified problems numerous, and often repeated in the reports by several different specialists.
It is therefore necessary to go through the detailed work, to put the basic information into an
annex, to group the results by issue or by education level, and to arrange them by order of
importance in a kind of hierarchy. Also, problem presentation and discussion sessions can be
organized, as well as priority-setting exercises that result in a regrouping and reformulation of
the problems by priority and by major theme in the synthesis report.

For different reasons, most professionals involved in an ESD initiated by governments or external-
funding agencies tend to be planners and researchers close to the central administration.
Therefore, it is essential to check whether the contents of the ESD determined at the beginning of
the exercise and the main problems and conclusions identified on the basis of its results are
considered to be of major importance also by staff and stakeholders operating at other levels
and in other areas of the education system (supervisors, teachers, parents, students, local
employers, etc.)

In the course of their research, the ESD analysts will have collected interesting opinions
expressed by the specialists and stakeholder groups met. It would be a serious loss not to reflect
these in the diagnosis. Experience shows that seminars, during which preliminary diagnosis
reports are reviewed by practitioners, local officials and shared with other actors concerned,
often lead to substantial improvement of the diagnosis, and also pave the way for an acceptance
by these groups as to the conclusions and suggested changes of such studies.

While the purpose of an Education Sector Diagnosis is not to provide definitive solutions to
identified problems, the final report should suggest possible roads to improvement to be
explored.

When it comes to informing top-level political officials, it is essential that the information be
presented very clearly and concisely. This can be achieved by means of executive summaries of
the synthesis report that set out the key findings in a way that facilitates rapid assimilation.

For the political authorities to whom the ESD report is generally submitted, it is difficult to accept
a diagnosis that only makes critical comments. Problems must of course be identified, but so
should the strong points of the system. If the weaknesses deserve to be criticized and current
“blind alleys” elucidated, showing that there are ways of correcting the situation keeps hope
alive, and hope is essential when it comes to suggesting promising new roads towards
development. Thus, the golden rule is: no problems without the suggestion of a solution (but also
no recommendations if one has not succeeded in sorting out and presenting the problems
clearly).
3.5 Entering into policy dialogue

While it is useful to keep decision-makers informed throughout the sector diagnosis, the material required to start the policy dialogue officially will only be available at the end of this first phase of a sector analysis. However, there is no general rule in this respect, since decision-making channels vary from country-to-country.

It is important to take advantage of every opportunity of informing key representatives of the authorities, such as influential ministers, the parliamentary Speaker, influential political party members, and representatives of aid agencies. Organizing official presentations of research results and distributing the synthesis of the diagnosis report are ways of attracting the attention of decision-makers, of making them sensitive to the urgent problems of the sector, and of preparing them for the adoption of new development policies.
Group Activity:

Prepare the following activity with your colleagues. To do so, we suggest you to first reflect individually on the two parts of the group activity below, and prepare a short draft of your answers (in telegraphic style). You will then discuss them with your colleagues in a Group session. After the Group discussion, the final answers of your team should be summarized in a Group Response/Report to be sent to IIEP.

**Part A.** Gather information on, discuss and provide a summary answer (about 2 – 2 1/2 pages) to the following question:

What actors and stakeholders were consulted, or involved in the preparation of (a) the education-related part of the PRSP? and (b) the current medium- and long-term education plan/sector strategy? More specifically, to what extent and in which respects has the preparation of these strategic documents involved the participation of the local communities, the civil society, teachers, NGO’s? What kind of difficulties needed to be addressed in these consultation processes?

**Part B.** Look at the table of contents of an ESD report presented in Appendix 1 to Unit 1 and indicate for each chapter title (in bold) of the table from which Ministry and Department, Office, NGO etc. the relevant related data and information would be made available for the Education Sector Diagnosis (ESD) in your country. Indicate also the chapter topic for which you would have only scarce or ‘weak’ (unreliable or inconsistent) data.

Write a short comment on the type of difficulties currently faced in your country to obtain adequate data for an ESD and their possible reasons (1 - 1 ½ pages).
Appendix 1


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UNIT 2. EDUCATION SECTOR DIAGNOSIS: OVERALL ANALYTICAL FRAMEWORK AND CONTEXT ANALYSIS

A sound assessment of the functioning and performances of an education system in an ESD requires a systematic and scientific approach and the application of a range of angles of analysis, indicators and research instruments for the purpose. Therefore, diagnoses or ‘assessments’ of a country’s education sector are generally guided by a rather comprehensive ‘analytical framework’. At the same time it is important to note that educational systems are not evolving in a vacuum. They have to serve and are influenced by the society within which they are operating (social, political, economic, financial, cultural, natural environment, etc.) and these ‘contextual factors’ have to be taken into account in an ESD.

Unit 2 is divided into three parts:

Part 1 introduces the overall “analytical framework” commonly used for an ESD and reviews the Context Analysis and each of the seven key aspects or angles of analysis (Access; Internal Efficiency; Equity; Quality; External Effectiveness; Costs and Financing; Management) applied in an ESD to review the current state and functioning of an education system within its environment at a given point in time.

Part 2 deals specifically with the Context Analysis in the framework of ESDs, i.e. the way in which the demographic, geographic, cultural, economic, financial, social, political and institutional environments of education are approached in a sector diagnosis.

Part 3 introduces the “practical example” of an ESD carried out in NOVANIA (a –not completely – imaginary country) and invites you to reflect on and learn from the Context Analysis included in this example of an ESD.

Unit Objective:
The central aim of Unit 2 is to provide you with an understanding of the contents of an ESD and an overview of the ‘analytical framework’ widely applied for this type of diagnosis. At a second stage the unit aims to give you in particular a practical grasp of the context analysis included in ESDs.

Unit content:
- The Analytical Framework;
- Analysis of the Context of Educational Development;
- Context Analysis in ESD: Example of Education Sector Diagnosis (the case of ‘Novania’).
**Expected learning outcomes:**

Upon completion of Unit 2 you should be able to:

- identify and summarize the main characteristics and limitations of the system approach and the economic paradigm when applied in an Education Sector Diagnosis (ESD);
- identify and explain the main angles of analysis, as well as the essential questions to be investigated by an ESD;
- establish the contents of an ESD taking into account the country context and policy;
- identify the main contextual factors and key indicators to be included in an ESD;
- explain the main challenges, assets and constraints resulting from these contextual factors for Human Resource Development in a given country case study.

**Timeframe:**

- The study time required for this module is approximately 8 hours per week.

**Questions for individual reflection:**

- In this unit, you will be asked to address an individual question for reflection related to the content of Part 1.

**Group Activities:**

- At the end of the unit, you will work with your colleagues on a group activity related to Part 2 and 3. This activity focuses on the analysis of the contextual factors and the financial and administrative capacity for educational development, in the framework of an ESD.

**Reading:**

In addition to this document relating to Unit 2 of Module 3, we strongly recommend you to read the following documents which are available on the ESP webpage on IIEP’s website:

PART 1. THE ANALYTICAL FRAMEWORK

1.1 Theoretical foundations

Education sector diagnoses conducted in many countries are predominantly based on the system approach and the economic paradigm. This perspective, which has also been adopted – with some modifications and extensions – in the present training programme, is examined below.

The System Approach

Since the second half of the 20th Century, the system approach has gained huge ground as an analytical tool. One of the essential principles of this approach is to consider any structure and organized activity, for instance the education sector of a country, as a system that produces a certain number and types of results or outputs, made from a processed combination of different resources or inputs.

Such a system is itself part of, and dependent on, a larger system. The education sector, for instance, is part of the country’s socio-economic system providing the inputs/resources (students, teachers, textbooks, financial means etc.) that are used in the process of educating and training its population. Moreover, the education sector comprises several sub-sectors, e.g. primary, secondary, higher, technical, adult education etc.

Another major principle of the “system approach” is that it is not possible to understand and explain the way in which a given structure functions or operates – unless it is put into its context, and the links with the other structures of the larger system to which it belongs are identified. The system approach has been widely applied not only in biology and technology but also in the social sciences for the analysis of modern societies and organizations. (Crozier & Friedberg, 1992).

The system approach constitutes a useful conceptual tool for obtaining a comprehensive view of the functioning and outputs of the education sector operating under constraints of various types (financial, economic, political, social, etc.). Such an analytical perspective is required whenever a country’s education policy has to be reviewed and redefined entirely.

It must be noted however that, contrary to organic systems, social systems are not “self-regulatory” but composed of human beings who have a right to decide on their lives. In other words, those directly concerned by education should get the opportunity of questioning the education policy objectives instead of treating them as given. Therefore, more and more authors of ESD, while adopting a predominantly system’s management approach, do recognize the importance of bringing in the views of the recipients and major actors (e.g. students, teachers, employers) of the education system and of trying to make them participate in the design, conduct and follow-up of the sector diagnosis.
According to the economic paradigm, the other theoretical “pillar” of an ESD, human beings working together in an organization tend to strive towards the best outcome possible with a minimum of resources invested.

The Economic Paradigm

“Human behaviour is analyzed here as a relationship between aims/ends (which are numerous) and means (which are scarce); the assumption is that “human beings seek to attain optimal allocation of scarce resources in order to reach solutions that, from their point of view, are the best ones – knowing that when choosing one thing, one has to give up other things that, one would have preferred not to abandon under other circumstances ... “Applied to education, it is obvious that this approach considers analyzing many issues that go well beyond what is highlighted in financial accounting. The following two complementary aspects are particularly important:

The first one refers to the results achieved. (...) The “aims/ends” of education constitute the focal point of the analysis: “education is provided so that the pupils acquire as much as possible during their studies”.

(...) The second key aspect here is that all goals are not attainable at the same time, because of the limited means that are available (time, money, technology). The main challenge, then, is to find the best compromise between contradictory goals and actions to be prioritized – in order to maximize the achievement of the general goals and specific objectives of an education system in a given national context, and, especially in relation to available resources”.

(... “In this framework, the economic perspective becomes a useful tool for informing education policy issues”. (...) It is relevant for analyzing the efficiency with which public resources are used, for comparing the potential pedagogical benefits linked to different actions, and, subsequently, identifying those likely to have the best results in view of the costs involved (e.g. alterations in class size, teacher training and instructional management).}

(Translated from: Mingat & Suchaut, 2000).

The economic paradigm is prevailing in most ESDs for two principal reasons:

- Acting in a context of international economic competitiveness, policy-makers and educational managers can hardly afford not to be “output oriented”, i.e. assess the results of education in terms of the “productivity” or “value” of the human resources produced. However, to measure the productivity or returns of an education investment in economic terms only is highly questionable.

- External funding agencies that often instigate or promote Education Sector Diagnosis (ESD) are interested in assessing the costs and effectiveness of the educational projects they are supporting. Major changes in a country’s political system, serious problems of socio-cultural integration, defense of the interests of minorities etc. may lead political decision-makers and external actors to give more weight in an ESD to political and/or cultural values than in the past – and less to economical and financial considerations.
To sum up, sector diagnosis is usually led by the following two central questions:

- To what extent does the education system achieve its objectives?
- Are the objectives pursued in an efficient manner?

The first question concerns the implementation or progress made towards the fixed objectives. The second question deals with the efficiency or lack of efficiency displayed by the education system in seeking to achieve its objectives: are the available resources used in a satisfactory way, and eventually, at least costs?

Education Sector Diagnosis (ESD) tends, however, to neglect or not pay enough attention to another crucial question relating to the very justification of the system’s objectives:

- To what extent do the policy objectives correspond to the real needs and expectations of the population groups concerned?

Actually, it is not very useful to evaluate the efficiency with which an education system seeks to attain its objectives if key stakeholder groups do not share these goals. That is why those in charge of designing an ESD should assess the extent to which various education actors and interest groups are in agreement with the current policy objectives. If it turns out that there is not really any consensus, it might be sensible to organize national consultations and debates in the form of so-called “Round Tables” for revising or reformulating, subsequently, the main education policy objectives.

Multi-lateral and bi-lateral agencies have, since the 1990s, encouraged the participation of not only the groups directly concerned by education, but also of representatives of the “civil society” (e.g., non-organized groups such as employers of the informal sector) in the preparation of new sector strategies. The reasons behind this changed attitude in favour of more consultation and increased participation are essentially twofold: it would make the content of education more relevant to the needs and expectations of social and economic actors, and not the least it would also make the reforms more acceptable and, by that token, increase the likelihood that they be implemented.

Another reason is more of a conceptual nature: sector approaches based on a predominantly economic perspective seem rather inadequate to explain the causes and characteristics of poverty that remains or even increases in many developing countries, and which affects the prospects of education. To include a “social concern or social perspective”, and listening to, in principle, all the voices of the population, is increasingly considered as an appropriate response to the previously mentioned conceptual shortcomings.

Finally, independently of the paradigm used in the diagnosis, to achieve sustainable education development it is necessary to bring in a long-term perspective in policy analyses. Although political actors are generally driven by short-term electoral considerations it should not be overlooked that the whole population of a country has an obvious interest in drawing lessons from the past and in determining the long-term effects of possible education policies on its social, cultural, economic and political life in the future.
### 1.2 Major angles of analysis

ESD generally studies the education system: (i) in the country-specific context of human resource development and (ii) from various aspects or angles of analysis, which, when put together, should give a rather comprehensive picture of the sector and its performance.

- Context
- Access;
- Internal efficiency
- Equity
- Quality
- External effectiveness
- Costs and financing
- Management

#### 1.2.1 Analysing the context of educational development

In order to assess the specific context for human resource development within a country at a particular point in time, ESD generally starts with a summary view of the main features and trends characterizing its population, natural environment, history, local cultures and languages, social well-being (including poverty), economy and economic environment, political setting. It also points out the related main challenges for education. Thus the “context analysis” in ESD often deals with questions such as:

- **At what rate has the population been growing recently and what are the related challenges for the development of schooling?**
- **Is the country characterized by a large linguistic and/or cultural diversity to which the education system has to respond?**
- **Considering the recent trends and future prospects of economic growth characterizing the country, can one expect that more resources will be available for the development of education?**
- **What is the proportion of the population living in poverty? What are the implications in terms of special support needed to promote their participation in education and training?**
- **To what extent can new education policies and plans be grounded on a democratic and stable political setting?**

The context analysis usually also includes an assessment of the financial and managerial capacity of the education sector without which it is not possible to select and design new and realistic education policies and strategies.

Some related crucial questions addressed in the “context” chapter of ESD reports are, for example:

- **Does the financial situation of the country allow for increased public expenditures on education; or does it rather put severe limitations to future budget growth?**
- **To what extent and at what levels are there weaknesses in the management of human, financial and other resources of the education sector?**
1.2.2 Access to education

There are some specific questions that are commonly linked with this aspect; first of all:

- How many children and, possibly, adults are potential ‘clients’ for the different levels of school and out-of-school education?
- What is the minimum level of education required by society for each of its members?
- Who actually wants to receive what kind of education?
- In case the available resources do not allow to respond to all creeds, which should have access to different levels of school and out-of-school education?

Another related issue equally important for defining education policy concerns who does not have access to education, and why? Is it due to low demand for school education among certain population groups or to insufficient school infrastructures and facilities? The answers to the above-mentioned questions are of a rather political nature, depending partly on the country’s Human Resource Development (HRD) goals and partly on the financial resources that the government allocates to education and its various sub-sectors or levels. The questions can only be fully answered at the end of the sector analysis, after the development priorities of each sub-system have been established.

1.2.3 Internal efficiency

Internal efficiency analyses are centred on the question:

- How much resources are spent to bring the pupil population considered to a certain level of education?

The question is of interest from an economic or “cost” point of view; but the retention and progress of pupils have also, more recently, attracted growing attention in the context of Education for All (EFA) plans and policies aimed at bringing all children to a minimum level of basic education.

The internal efficiency of education systems is generally assessed by studying the dynamics of student flows and by measuring dropouts and repetitions as well as the time and resources needed to produce the graduates leaving the education system at the different levels. Such an approach has obvious limits: it does neither assess the educational career of pupils in terms of their own costs and benefits, nor indicate the causes of the “inefficiencies” identified. However, such analyses of efficiency have the merit of drawing the attention of education decision-makers to possible problems or inadequacies at particular levels of the system. For example, if one-third of the pupils do not succeed in getting beyond the first year of primary school, it is no doubt more useful to tackle this problem than to try to increase first-year admissions in low enrolment zones.

Furthermore, examining variations of drop-out and/or repetition rates over a certain period often makes it possible to detect defects or changes in the policy or environment of education. Increasing dropout rates may be the result of pedagogical changes, or of administrative measures such as an arbitrary reduction in the number of pupils per class who are allowed to repeat. In other cases, substantial economic recession or cuts in the public budget can lead to decreasing rates of participation and retention. Interpreting the causes of such variations is essential in order to find the right remedies to the identified inefficiencies.
1.2.4 Equity

Disparities in education often exist between girls and boys, between children living in different geographical areas, and coming from varied socio-economic or cultural groups etc.

Inequities between children are not limited to access to education, but can be found with respect to internal efficiency (e.g. grade repeating and early withdrawals being more frequent among girls and pupils in rural areas), and as regards the quality of education provided.

The following are crucial questions to be tackled:

- To what extent are there significant disparities with regard to access and educational attainment of different groups at the various levels and sub-sectors of education?
- Can these disparities be explained by unequal quality of educational supply (in terms of teachers, pedagogical support networks, textbooks, school buildings etc)?
- Are the observed problems of access to, progress through and achievement of certain groups due to cultural and/or socio-economic factors?
- How can these problems be tackled? What have been the effects of past strategies of preferential treatment to socially underprivileged groups? etc.

1.2.5 Quality of education

In practically all countries, there is a growing interest in assessing the quality of educational outputs or products. These are usually evaluated in terms of the knowledge and competencies that pupils or students have acquired. Few studies cover the acquisition of attitudes and behaviour that schooling is supposed to develop. To improve the value of educational output implies reviewing the quality of the context and inputs of schooling, which include teachers, curriculum, school infrastructure and materials, and that of the teaching-learning process itself. (These points will be developed in more detail in UNIT 5).

Examples of essential questions relating to the quality of outputs are:

- What level of knowledge have the pupils/students acquired in core subjects (e.g. mathematics, mother tongue, civic education)?
- What attitudes and behaviours (e.g. “exercising responsibility towards others”) have they developed?

Before taking any decisions concerning quality improvement, the diagnosis will have to pin down the specific characteristics of the inputs and processes.

Relevant questions relating to the quality of inputs include the following ones

- What is the average teacher level of training? How adequate is it?
- Are the textbooks adapted to the level of the majority of pupils in a given grade (e.g. the language and illustrations used)?
- Do all teachers have an adequate guidebook, instructions and other teaching aids?
- To what extent are schools actually provided with the legally required minimum of facilities and equipment (clean water, latrines etc.)?

Crucial questions on the processes concern:
? How do teachers teach in class? (e.g. extent to which they use pupil-centred teaching, importance given to learning in small groups)?

? How much and what kind of pedagogical support do teachers receive?

? How much time do they actually devote to teaching in class?

? How does the school management function and what is the administrative capacity of Heads of schools?

1.2.6 External effectiveness of education

Evaluating the external effectiveness of education consists in assessing the relevance of the output in relation to the needs of the economy and of society at large.

Examples of essential questions to be raised include:

? To what extent do school leavers find an employment in (i) the formal sector and (ii) in the informal sector?

? Do the skills and competencies acquired match those required by employers in different sectors of the economy?

? How useful are the knowledge and skills acquired at school for improving pupils’ behaviours/habits with respect to health protection, nutrition and other “life skills”?

Answering these kinds of questions is essential for the definition, or redefinition, of Human Resource Development Policies, but the connection between social development and education is neither easy to assess nor has it attracted the attention it deserves from specialists. Not only the methodological complexity but also the time and resource constraints of sector analyses fix limits to the desirable research on crucial topics, such as the “linkages between training and employment”, the “adequacy of education programmes for social and personal development”, etc.

A sector diagnosis should, nevertheless, aim at providing policy-makers and system managers with relevant information on the adequacy between the “products” of the education system and the country’s social and economic goals. This implies synthesizing the results from studies that have already been carried out and, if necessary, conduct surveys in this area.

1.2.7 Costs and financing

Analysing costs and financing in an ESD is not confined to a statement of accounts; it also entails examining the procedures used for budget preparation, expenditure commitment, reporting and control. Moreover, it comprises a review of the sources of educational financing and an appraisal of the possibilities of increasing the available resources for education.

Fundamental questions on cost and financing include the following ones.

? How much is spent on education per year by the country? How have education expenditures evolved during the last 10 years?

? What are the main sources of funding?

? Does the country’s system of financing education worsen or reduce social inequalities?

? To what extent is the present management of resources efficient and effective?
How to reduce the cost of education?

How to mobilize additional resources for education?

Analysing the cost of education may seem tedious, especially to educators, yet it is important to know the present use of resources, and to be able to judge whether or not the allocation of funds among levels and types of education is satisfactory, equitable and rational. At the same time, it is a prerequisite for feasibility studies of proposed reforms. Finally, the study of actual educational expenditure and resource allocation is a way of verifying whether a policy announced by the government is being implemented in practice.

1.2.8 Management of the education sector

There are various possible ways of assessing the strengths and weaknesses of the management of education within ESD. One approach, which is widely used for this purpose, consists of conducting an audit, or organizational analysis, investigating the following four major functions or levels of management, the:

1. **Strategic function**: its investigation should comprise analyses of policy-making processes and the preparation of development plans and budget with the aim of assessing their internal coherence and their actual contribution to the attainment of the main education policy goals.

2. **Management function (stricto sensu)**: its analysis has the role of detecting deviations in system functioning from chosen norms and objectives, and of reorienting its resource allocation.

3. **Information function**: its study concerns the collection of information flowing in from all administrative units, and processing, storing and redistributing it to all those who need it to take their decisions and guide their work.

4. **Operational function**: aimed at ensuring the functioning of the education and training processes as such this function can itself be sub-divided into two levels – the classroom level and the level of pedagogical support – both of which should be investigated.

The management of human resources, especially teachers, is particularly crucial for both the investment in and the results of education, and has therefore attracted special attention in recent ESDs.

One of the main weaknesses of conventional approaches of management analyses is that they take the main education policy objectives for granted, thus neglecting the changing needs and expectations of various population groups. The development of a sector-wide strategy for education can be an opportunity to encourage and promote transparency and participation in administrative and political decision-making.
1.3 Combining angles of analysis

In Education Sector Diagnosis (ESD), it is essential to combine different angles of analysis in order to come up with a comprehensive view of the educational reality. For instance, the “cost and financing” and “management” aspects are closely interrelated in that they analyse the means available to the system and their utilization; when combined with quality and efficiency criteria, they provide an insight into the problems of cost efficiency and cost effectiveness.

Moreover, an ESD which limits itself to analysing the “functioning of the system” and which does not really take into account the views of stakeholder groups, especially those directly concerned (students and parents), is no longer acceptable: consulting and involving these groups should be – and are in fact more and more – part and parcel of the preparatory work for sector-wide plans and strategies. They generate evaluation criteria which are not necessarily all included in the framework presented for the present course but would have to be taken into account in the sector work in practice.

1.4 Some final remarks on the selection of the content of an Education Sector Diagnosis (ESD)

Although an ESD should provide a comprehensive picture of the education sector (covering all the sub-sectors), it should be kept in mind that the content and scope of the investigation have to be confined, from the beginning, in view of the limited time and resources available for this exercise. Also from the outset, decisions have to be made as to what sub-sectors and main aspects should be given particular attention.

In a country where the economy is largely dominated by agriculture, where illiteracy among the population is widespread, and where primary education for all children remains a remote objective, the focus and content of an ESD will necessarily differ from a sector diagnosis organized in a country characterized by rapid industrialization requiring a significant increase in qualified secondary and post-secondary graduates. The distinctive features of each country e.g. the existing inequalities: economic, social, geographical, the systems of management and financing of education etc. will, obviously, also have to be taken into account when designing a sector diagnosis.
Questions for individual reflection:

Reflect individually on the question below and prepare short notes of your answers. Please mind noting your answers below in order to have them available for Group discussions on the contents of your Country Plan/Review Document to be prepared during this Distance Education Programme and finalized in its final stage (November 2010):

Take a close look at the most recent Education Sector Plan Document adopted in your country.

1. Which of the above-mentioned sub-sectors, angles of analysis and major issues have been given particular attention in the diagnosis/situational analysis included in this document?

2. Why do you think that certain crucial sub-sectors, angles or issues have apparently been neglected and to what extent do you find this justified?
PART 2. ANALYSIS OF THE CONTEXT OF HUMAN RESOURCE DEVELOPMENT

2.1 Introduction

The specific context for human resource development in a country, at a given point in time, is defined by the country's population, its history, local cultures, economy, labour market, political and social organization. This context not only affects the choice of the country's future education policy goals and objectives, but also the various “inputs” and processes which may – in a short- and medium-term perspective – be mobilized to attain the selected goals and objectives. Also, the financial and managerial capacity of the education sector itself needs to be assessed, from the very beginning of an Education Sector Diagnosis (ESD), in order to obtain a realistic view of the constraints and conditions impinging upon the implementation of possible policy options.

In general, an ESD therefore starts with an overview of the main features and trends characterizing the general and managerial “context” in order to point out the major challenges and constraints for the future development of education and training in the country concerned.

2.2 Selected key issues to be covered

Regarding the overall environment of the education sector and the related challenges that it will need to address, some of the main issues to be clarified in an ESD are the following:

2.2.1 The country, its population, culture and political context

* What are the major physical features of the country (e.g. arable land area) and how is this reflected in the distribution of the population (e.g. population density); what are the trends regarding the country's natural environment (destruction of soil, forests etc.)?

* What is the size and age pyramid of the population? At what rate has the population grown over the last 10 -15 years? To what extent has the population been affected by migrations, pandemics? (e.g. HIV/AIDS).

* What is the ethnic composition of the population? What is the distribution of the country's linguistic groups? What are the consequences of this situation for education policies regarding curricula, the language(s) of instruction, and the organization of educational provision?

* Which are the principal events and landmarks in the country’s political, economic and social history since independence?

* What political system has the country adopted and what is its current institutional framework (e.g. multi-party democracy, the legislative and executive powers separated)?
2.2.2 The social context: poverty and well-being

- How have health and living conditions in the country improved (or become more difficult) over the last 10 years?
- How many people and which percentage of the population live below the poverty line? Do they consider themselves as excluded from social life and benefits?
- To what extent has participation in education been affected by poverty? What has been and what could be the contribution of education to improving the situation?

2.2.3 Economy, employment and public spending

- How have the living conditions (economic and social) in the country evolved over the last 10–15 years? What relationship is there between this evolution and the level of education attained by the population?
- How has the country’s overall economic production (e.g. Gross Development Product/Capita), evolved over the last decade? Is the pattern stable? How dependent is the country on external financing? What is the development situation of government revenues during the last ten years?
- In what sectors have the production and/or employment increased in recent years? In what sectors has the country’s economy gained (or lost) international competitiveness? What is the relative contribution of the informal sector to production and employment?
- What are the major recent trends of manpower demand and supply? What levels of literacy and formal education characterize the population in general and the labour force in particular? What are the implications for the future development of post-compulsory education and training?

2.2.4 Financial capacity for human resource development and education

To draw a brief sketch of a country’s financial capacity for human resource development in the future, an ESD usually has to look at issues like the following:

- What shares of the GDP and of the total public expenditures respectively are allocated to the education sector? How does this practice compare with other countries in the region?
- What is the estimated size of the future public investments in human resource development?
- Are there indications of “overspending” or resource wastage at certain levels of education?
- How do the costs of education at the various levels compare with its “benefits” (from the individual and public perspective respectively)?
2.2.5 Management capacity

The global assessment of management capacity requires a look at issues such as:

- The respective role and organizational capacity of the public and private sector to provide education and/or training.
- The degree to which education management is decentralized.
- The fields and administrative levels where education management appears to be weakest.
- The programmes and institutional changes aimed to promote management capacity of the education sector.

Such background information on the education system’s financial and management capacity is very useful to better understand, and eventually address, the existing problems of internal or external efficiency, of access, equity, quality or cost of education. A more detailed and systematic diagnosis (in the form of an organizational “audit”) of certain or all parts of the current system of educational management is sometimes carried out in the framework of an ESD; for instance when there appears to be serious weaknesses in the management of specific sub-sectors, or even as regards the overall administration of education.

2.3 Main indicators, data to be collected and sources of information

Table 1 below gives examples of major indicators of the “context” of an education system that are likely to affect the future development of education.

Table 1. Examples of indicators of the context of a country's education system

<table>
<thead>
<tr>
<th>Domain/Aspect</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demography</td>
<td>Population size; Annual growth rate; Percentage rural population; Percentage below 15 years of age etc.</td>
</tr>
<tr>
<td>Policy</td>
<td>Government expenditure on education as a share of total government expenditure.</td>
</tr>
<tr>
<td>Geography</td>
<td>Climate; agriculture; Percentage arable land area; Percentage area inhabited.</td>
</tr>
<tr>
<td>Economy</td>
<td>GDP per capita; Growth of GDP; Growth of foreign investments</td>
</tr>
<tr>
<td>Public Finances</td>
<td>Government income; Government expenditure; External debt service.</td>
</tr>
<tr>
<td>Employment</td>
<td>Number employed in the informal sector as percentage of total employment; Employment by sector and branch</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Social/Poverty</td>
<td>Human Development Indicator (HDI); Percentage population below poverty line (e.g. living on less than US$1 per day). Life expectancy.</td>
</tr>
<tr>
<td>Management Capacity in Education Sector</td>
<td>Percentage of budget economized; Percentage of programme implementation; Frequency of complaints on administrative irregularities.</td>
</tr>
</tbody>
</table>

Relevant recent data and information concerning most of the above-mentioned contextual variables (except for population size and growth, in certain countries) can generally be obtained from different ministries/departments (Economy, Finance, Labour, Health, etc.) and Offices (National Office for Statistics; Planning Office, etc.).

In actual practice, already existing studies have often been neglected for various reasons, the principal ones being that such previous studies are often not easily accessible (they are hidden or forgotten in an office of the Ministry of Education or elsewhere) and sometimes partly outdated. Moreover, agencies embarking upon an ESD have their own specific criteria and methods of work and are often reluctant to use the data and information generated by others (since they have had no control over the data gathering and processing). Yet, duplication of data collection is time-consuming, costly and frustrating for many of those involved and should be avoided whenever possible.

Data that are available should be used cautiously even when they seem to be accurate. The quality of the data usually needs to be checked. Population data, for instance, may not be topical (the last population census data being too old) or not very reliable.

“Generally speaking, it is helpful to compare certain census data (and the projections that result from them) with the direct observations of household surveys, when available”. (Mingat & Suchaut, 2000)
PART 3. CONTEXT ANALYSIS IN ESD. EXAMPLE OF AN EDUCATION SECTOR DIAGNOSIS (THE CASE OF ‘NOVANIA’)

3.1 Introduction

The following text presents an example of a sub-sector diagnosis. It is based on an education sector review carried out in one of the UNESCO Member States. For the purposes of this training exercise, the extracts used have been modified and updated and the country studied has been named “NOVANIA”.

We shall examine and discuss this case study throughout the remainder of the course in order to get a grasp of the general approach as well as of the major technical aspects of an education sector diagnosis. The exercise focuses on one particular sub-sector, e.g. primary education, rather than the entire education sector for two reasons:

→ First, it is possible to get a grasp of the methodology and instruments of an ESD through the analysis of a particular sub-sector, since the technical approach and major instruments applied are essentially the same as those used for the analysis of the entire education sector.

→ Second, an exercise considering all sub-sectors of the education system would be very time-consuming and would not be feasible within the limits of the present distance programme.

The example used for pedagogical purposes in the exercise by no means represents an ideal model of an education sector analysis. There actually is neither a commonly agreed “ideal model” of ESD, nor would it be possible to fully implement such a model even if it existed, given the multiple constraints – in terms of time, resources, available data, etc. – that sector diagnosis has to cope with in practice.

3.2 Contextual analysis

3.2.1 Geography and demography

With a land area of 550,000 km, the Republic of Novania is situated on the African Continent. Over three-quarters of the land area is arid or semi-arid. The 2001 census showed that 75 per cent of NOVANIA’s 29.5 million inhabitants live in rural areas. The population comprises 30 indigenous communities (each with its own mother tongue).

The population growth rate which currently stands at 2.4 per cent has decreased during the last 10 years. In recent years, life expectancy has fallen significantly (mainly due to the HIV/AIDS pandemic). The country’s high dependency ratio (over 50 per cent of the population is below 15 years of age) is putting pressure on the provision of social services such as primary education and health care.
3.2.2 Economy and the labour market

Between 1990 and 2000 NOVANIA encountered serious economic challenges with significant implications for other sectors including education. Its economy grew by an annual average rate of 1.5 per cent which was far below the population increase. The relatively low performance of the economy is due to several internal and external factors such as: droughts and decaying external environment (international prices of the country’s export products have fallen while the costs of imported raw materials have increased); stagnating and even reduced donor contributions due to poor governance and insufficient commitment to a reform programme (the country’s capital budget is relying heavily on external supports). In spite of improved rates of economic growth in the past few years, NOVANIA remains among the poorest countries of the region with a per capita GDP of US$240.

NOVANIA is well-endowed with natural resources, especially hydropower, but wood fuels account for about 75 per cent of total energy consumption. While agriculture continues to be by far the most important activity (providing a livelihood for over three-quarters of the labour force), the new driving-edges of the country’s economic development are manufacturing, trade and tourism. In 2004, these industries’ share of the GDP stood at 26 per cent (and is estimated to attain 30 per cent in 2015). Most of the active population (80 per cent) is still in the informal sector and agriculture. The attainments of the manufacturing sector of NOVANIA appear to be better than most other countries of the region but the results achieved are considerably below the targeted economic growth and employment generation.

The Government plans to boost investments in manufacturing and tourism; both are expected to contribute significantly and increasingly to the economic development and creation of new jobs. The Government, in co-operation with the private sector and regional and local actors, is developing a strategy of diversifying tourism in NOVANIA and targeting new categories of tourists from a broader range of countries.

According to the 2001 census, the labour force participation rate for the population aged 15-64 years was 82.6 per cent. A total of 53 per cent of the employed population in the age bracket 15-64 years were males. The overall unemployment rate was about 17 per cent of the labour force. In the urban areas the rate was 25 per cent, compared with 11 per cent in the rural areas. In spite of several years of schooling, the majority of the unemployed do not seem to possess the skills needed for entering into the labour market. The hidden unemployment in agriculture, but also in other sectors, remains a serious problem.

3.2.3 Poverty and the socio-cultural context

The population living in absolute poverty on less than US$1 per day – as defined in the Government’s latest poverty report – was estimated to be 55 per cent in 2001. The number of unemployed and working poor has grown rapidly especially among subsistence farmers, female-headed households and inhabitants in slum areas. Poverty is also associated with weather ravage, undiversified food production, low level of education, shortage of health facilities and clean water. For instance, only 25 per cent of the population in the Northern Province can access proper sanitation facilities compared to 99 per cent in the Central Province and in the Capital Novoto. NOVANIA belongs to the category of poor countries characterized by a high concentration of earnings among its highest income groups with the 10 per cent richest accounting for about 40 per cent of the national income.
Three-quarters of NOVANIA's population live in Malaria-prone areas and HIV/AIDS has taken alarming proportions in the country: the national prevalence rate among adults (more than 15 years old) was estimated at 14 per cent in 2005. The epidemic is changing the country’s demographic characteristics: (i) the population growth is decreasing and life expectancy dwindling, (ii) child mortality escalates and dependency ratios increase. In Novania, the number of orphans is estimated at 1.9 million; and several million children are now living with and caring for sick parents.

Illiteracy is usually found to be much more frequent among the poverty-stricken groups in society, and especially among women. However, in NOVANIA the 2001 Population Census estimated that more than 80 per cent of the adult population in NOVANIA was literate – an impressive figure compared to most other countries of the region. This national average masks very significant disparities: the Census estimated that only 7 per cent of the women in the Northern Province were literate while the corresponding figure for the Capital was 89 per cent.

3.2.4 Policy priorities and strategies

The main objectives of the Government’s reforms launched in 2004 were to restore the growth of the country’s economy, strengthen its institutions, expand the physical infrastructure, and invest in education and training (especially of the poor). A series of policy measures and strategies were developed to achieve sustainable improvement in the welfare of all Novanians and to attaining the Millennium Development Goals (MDG) by 2015. These include the National Poverty Reduction Plan (NPRP), the Education for All (EFA) Plan and the Economic Development Strategy (EDS). The Government considers education as a determining factor of economic growth and as an important instrument for poverty reduction.

3.2.5 Administrative and planning mechanisms

According to the Constitution of NOVANIA, elections of the President of the Republic and the members of the National Assembly should take place every five years. The last elections were held in 2003. The central government is headed by the Prime Minister.

There are eight administrative regions in NOVANIA known as provinces, namely, Central Province, Coastal Province, Lake Province, Northern Province, Novoto (the Capital), Novanza, South East Province and Wanga respectively. Within the provinces there are districts and divisions.

While the Ministry of Education has the overall responsibility for the professional and administrative services in education, other actors providing education and training include the Ministries of Local Government, Home Affairs and Labour respectively. The education system of NOVANIA is very centralized: the various curricula (and the development of instructional materials), the national examinations etc. are centrally set and managed. Provincial Directors of Education, District and Municipal Education Officers are in charge of administration and supervision of education in their respective provinces, districts and municipalities.

When the new Government came to power in 2003, overall policy frameworks geared towards decentralizing certain key functions to district and institutional levels were discussed and adopted. The aim of the ongoing reforms is to bring services closer to the beneficiaries, and to ensure that support reaches the school children without unnecessary delay. The reforms will probably take quite some time to materialize in view of the current limited capacity in education service delivery, in particular at the district and school levels.
3.2.6  Education, finance and expenditure

Education financing comprises all financial expenditures made in the public sector and by stakeholders in the private sector (households etc.) NOVANIA invests relatively more on education than most neighbouring countries as reflected in terms of total Government spending (23 per cent) and the proportion of GDP (6.8 per cent) devoted to education. It should be noted that the slow expansion of the economy during the 1990s, resulted in over-runs of Government expenditure in social services including education. As we shall see later this relatively high allocation to education does not necessarily mean that the performances of the education system in NOVANIA (enrolment, internal efficiency etc.) is, in all respects, correspondingly higher than those recorded in other countries of the region.

At the same time, it should be noted that parents have been contributing to a significant extent to the financing of education in NOVANIA. In the beginning of the 1990s, the Government had introduced (under the structural adjustment programme) a cost-sharing policy in education which was abandoned in 2005.

3.3 Structure of the education system and policy

The main structural features of the education system of NOVANIA are summarized below:

Pre-school education consists of 2 years early childhood education for 3-5 year olds. Enrolments have stagnated in recent years. However, the Gross Enrolment Ratio at the Pre-primary level in NOVANIA of 37 per cent, is relatively high compared to most countries of the region.

Primary education begins at age six and consists of eight years of primary school. In 2005, the primary education enrolment stood at 5,900,000 (representing a Gross Enrolment Ratio of 87.6 involving around 19,000 schools. Selection for secondary education is based on the students’ achievement in the national examinations for the NOVANIA Primary School Leaving Certificate. Only 40 per cent of those who completed primary school were admitted to the secondary cycle in 2000.

Secondary education lasts four years. In 2005 there were about 650,000 students enrolled in general secondary education. The transition rate from secondary level to university remains low: only 12 per cent.

Technical and vocational education is provided through 3 national polytechnics, 18 institutes of technology, 1 technical teacher’s training college and 20 technical training institutes and over 600 polytechnics distributed throughout the country.

Higher and professional education diploma programmes range from three to eight years. In 2006, the Gross Enrolment Ratio (GER) in tertiary education was 2.5 per cent (UNESCO, 2006).

Non-Formal Education (NFE) programmes are mainly provided and managed by communities and NGOs. Many out-of-school children aged 6-17 were absorbed in NFE centres in recent years, but enrolment figures are imprecise. Enrolment in adult literacy programmes has declined significantly during the last decade. The main challenges of NFE in NOVANIA relate to the quality of education provided and to the lack of linkages with the formal education system.
The overall education sector objectives and strategies in NOVANIA include, to:

1. Attain the goal Education For All (EFA) by 2015.

To attain the overall EFA goals, the Government started implementing in 2005 the “Free Primary Education (FPE)” policy signifying that school fees and levies were abolished at the primary level, and special measures taken in favour of disadvantaged population groups and areas.

2. Enhanced access, equity and quality at all levels of education.

The result of the 1st year of FPE implementation was an increase in primary school enrolment of almost 1 million pupils. Many children who for economic reasons never attended (or dropped out) took the opportunity to enrol. This expansion of school enrolment puts much pressure on the supply of classroom and other facilities, and may compromise the quality of learning. This is why the FPE is expected to be accompanied by important programmes of construction, teacher training, provision of textbooks and instructional materials.

3. Promote capacity building for education managers, planners, and teachers.

The expansion of the education sector and decentralisation of certain functions require (i) more co-ordinated planning and decision-making and (ii) strengthening of existing institutional arrangements and the capacity for service delivery.

4. Develop a national strategy for technical and vocational education and training.

The Government launched a new policy strategy for the sub-sector in 2005 with the aim of “elevating skills development for improved productivity to boost economic growth and employment”; This implies increasing training opportunities for school leavers to become self-supporting, to develop practical skills and attitudes necessary for income earning in the formal and informal sectors; provide technical knowledge and vocational skills for human resource development and enhancing the capacity of the modern sector of the economy.
Group Activity:

What conclusions would you draw from the general information on NOVANIA presented here with regard to the challenges and constraints facing primary education in this country? Please prepare a Group Response Report to be sent to the IIEP.

1. What are the main indicators used in the presented text to characterize NOVANIA’s (i) population (ii) economy and (iii) social well-being? And to which challenges for the future development of education do these indicators point? List briefly the identified indicators and specify the challenges for the development of education to which they point. You may wish to add to your text (1 page) a grid like the following one to summarise your main points:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Challenge for Educational Development to which this indicator points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual population growth. 2. Percentage of the population living in rural areas.</td>
<td>1. Degree of future pressure on primary education provision. 2. Potential demand of education particularly in rural areas.</td>
</tr>
</tbody>
</table>

2. Which relevant indicators are mentioned in the text to describe existing disparities characterising the society of NOVANIA? Which other indicators concerning social disparities should also be included in the context analysis of an ESD?

3. Considering the information on Government spending on education in Novania, what are the likely prospects and constraints for public investment in education in the coming years?
Bibliographical References


UNIT 3. ANALYZING ACCESS, INTERNAL EFFICIENCY AND EQUITY IN EDUCATION

Access to education, pupils’ progression and their equity with regard to education are closely interrelated as underlined in Goal N°2 of the Declaration of the World Education Forum on Education For All (EFA), adopted in April 2000 in Dakar (Senegal). “Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality”.

Unit 3 deals precisely with these three main content areas or ‘angles of analysis’ that are generally studied in Education Sector Diagnoses.

It is divided in two parts:

**Part 1** presents and discusses the main issues and tools relating to the mentioned content areas in ESD: it provides an overview of the main questions relating to “access to education”, “internal efficiency” and “equity in education” as well as of the indicators and research instruments commonly used to assess the state of an education system from each of these ‘angles’.

**Part 2** is entirely devoted to a practical exercise. It pursues the work on the case of NOVANIA started in Unit 2, and invites you in particular to consider and draw lessons from the way in which “access to education”, “internal efficiency” and “equity in education” are addressed in this ESD.

**Unit Objective:**

The general aim of this unit is to provide you with the knowledge and skills required to study the functioning and results of an education system, particularly those of the primary education sub-sector from the point of view of ‘access’, ‘internal efficiency’ and ‘equity’.

**Unit content:**

- Analysis of Access, Internal Efficiency and Equity Aspects in an ESD;
- Example of an Education Sector Diagnosis (the case of ‘Novania’).
**Expected learning outcomes:**

Upon completion of Unit 3 you should be able to:

- identify the problems and disparities regarding access and participation of students, and the capacity of an education system to educate the students within the stipulated timeframe;
- identify the relevant data, indicators and instruments for analyzing access, internal efficiency and equity in a sub-sector of education;
- interpret the data and indicators in order to understand the causes behind existing shortcomings and inequalities;
- assess the strengths and limits of the tools of analysis which are used in the sub-sector diagnosis to study the mentioned content areas.

**Timeframe:**

- The group study time required for this module is approximately 8 hours per week.

**Questions for individual reflection:**

- In this unit, you will be asked to answer questions for individual reflection in connection with the content of Part 1.

**Group Activities:**

- After having gone through this unit individually, you will be requested to work with your colleagues on a group activity related to Part 2. This activity will invite you to critically assess and learn from the way in which major aspects of access, internal efficiency and equity have been addressed in the ESD example of Novania presented here.

**Reading:**

For this unit you are asked to read the following documents which are available on the ESP programme e-learning platform:

PART 1. ANALYSIS OF ACCESS, INTERNAL EFFICIENCY AND EQUITY ASPECTS IN AN ESD

1.1 Analyzing access

1.1.1 Questions

It is generally admitted that everyone should have access to basic education: actual access to primary education is one of the aspects or essential criteria on the basis of which the education sector in a country is evaluated.

There are three key questions to be investigated in order to assess the actual conditions and problems of access to a particular level or sub-sector of the education system.

? Who needs education, how much of it – and for what purpose?

At present, literacy and numeracy is considered to be the minimum necessary for anyone in the pursuit of personal development, and for them to be able to participate socially, economically and politically in society. The idea of ‘basic needs in education’ is widely accepted in the ESDs. However, under some extreme circumstances, for instance in a post-war/reconstruction phase, or a situation of exceptional resource restrictions, it may be absolutely necessary for a government to decide which groups should get priority in accessing the existing education supply (e.g. children at the official age for admittance to primary education).

In many developing countries, the participation rates of the school-age population in primary education and of illiterate adults in formal and non-formal literacy programmes constitute the major criteria currently applied to assess the state of access to education. In the developed countries, and in some low- and middle-income countries as well, the basic level of education signifies primary plus lower secondary and, sometimes, even upper secondary education.

? How many people are not participating in, or rejected by, the education system at the level considered, and who are they?

In addition to knowing the precise number and proportion of the population whose educational needs remain unsatisfied, it is important to get a clear picture of the characteristics of this group in terms of gender, age, socio-cultural and linguistic background, etc. Overall access to education can only be improved if the particular needs of those who do not have access to education (or to a specific level of education) are identified and addressed (e.g. rural girls).

If the resources available are not sufficient to satisfy the needs of all, decision-makers will eventually have to address the issue of how many and which of these potential “clients” should actually be given access to the different levels of formal education in the near future. As mentioned in UNIT 1, this is a political question, with the answer depending not only on the financial resources that the government can allocate to the level or sub-sector under consideration, but also on other factors, such as the degree of political pressure and influence of the potential beneficiaries – and of external financing agencies – in favor of widened access to education.
Which factors may explain insufficient access to education?

Sector or sub-sector diagnosis generally looks at two categories of factors to explain why certain children or adults do not participate in education, namely those:

- Relating to educational supply or provision of education.
- Relating to the social demand for education.

Regarding “educational supply or provision of education”, one may find that it is organized in such a way that makes access to education difficult for certain groups. Supply factors often found to raise barriers to educational access for certain population groups, include the following:

- Long distances between the school and the children’s homes.
- Relatively high costs of formal education, such as school fees.
- Inadequate time-tableing, in the sense that the organization of the school year and daily schedules are in contradiction with major constraints and customs (for example, rural children’s participation in the harvesting often results in exceptionally high absenteeism during certain periods of the year).

Regarding “social demand for education”, the actual requests for education manifested by families may be very low for reasons such as:

- Particularly adverse economic family conditions may discourage parents from sending their children to school because of the supplementary income they could otherwise bring home; e.g. the “opportunity cost” is seen as too high.
- Customs, values and traditions of certain parts of the population may hinder them from keeping their children (particularly girls) beyond a certain age in school.
- Some population groups (nomads, for example) may feel that the type and content of education provided at school is not relevant to their own specific living conditions and culture.

1.1.2 Indicators

Indicators that are commonly used to assess the status and problems of access to different levels of education are listed below.

Evaluating access to education entails the calculation of:

- Gross and net admission rates to Grade 1.
- Admission rates by age.
- Gross and net enrolment ratios.
- Enrolment ratios by age.
- Transition rates from one cycle/level to another.

In order to define the unsatisfied needs or the potential clientele for education, an Education Sector Diagnosis typically uses and analyses data relating to the following indicators:

- Number and percentage of out-of-school school-age children.
• Number and rate of adult illiterates (note that the definition of illiteracy and that of the age-group concerned may vary slightly from country to country).

• Population by level of formal education.

• Projected manpower demand by level of formal qualification.

1.1.3 Availability of data and data collection instruments

The present situation and past trends regarding access to education are generally assessed through an analysis of the statistical data related to the indicators listed above.

It must be noted that in many countries the calculation of some of these indicators is difficult to assess because data are missing or existing data are unreliable. In addition, data available at the school or regional level may not be consistent enough to permit aggregation to the national level. Thus, up-to-date and reliable age-specific data on the population and on the children enrolled in the different levels and grades may not be available in a particular country. In this case, it is impossible to calculate and use admission rates by age and net enrolment ratios as indicators of access.

Furthermore, it is often necessary to carry out surveys (using questionnaires, interviews, case studies etc.) in order to identify the particular demand and difficulties of access characterizing certain groups, to explore their causes, and suggest possible options for improvement.

1.1.4 Analyzing access to education from an actor’s perspective

Let us assume that a non-governmental organization decides to carry out a study on the primary education sub-sector. The questions, which such an organization would like to tackle with regard to access to formal education, may partly coincide with, and partly differ from, those formulated in a system’s management perspective. For instance an NGO that is promoting rural development may wish to focus the analysis on children living in certain rural areas and identify their specific needs, and evaluate current policy and supply of primary education from this perspective.

In terms of instruments, priority may be given to qualitative analyses of the specific educational demand of the target group (through in-depth interviews, e.g.). The inclusion of statistical data and access indicators on the group studied would nevertheless be useful for this type of actor-oriented diagnosis as well.

1.2 Analyzing internal efficiency

It is important for planners and system managers to know how many of the pupils/students enrolled actually complete a given cycle of schooling or obtain a given diploma within the official time limit.

The optimal "internal efficiency" of an education system can be defined as “its capacity to educate the largest number of students (‘outputs’) which entered the systems at a given point in time with a minimum of human and financial resources (‘inputs’) within the official time limit”. This ideal situation signifies that the “wastage” of the system (e.g. student repetition and drop-out) is reduced to a minimum.
1.2.1 Questions

In most Education Sector Diagnosis (ESD), two major questions are investigated in order to assess the actual internal efficiency of education systems. The first main question concerns:

? The extent to which those entering, the education system, actually complete their studies and graduate, and how do they progress through a cycle or within a given level of the education system?

In trying to answer this question, the analysts should provide a clear picture of the input/output relationship characterizing the respective sub-sectors, levels or cycles. The diagnosis of the entire education sector should also include:

- An assessment of the student flows across the system through an analysis of their transition from one level, cycle or sub-sector to another.
- A comprehensive view of the streaming and distribution of the students within these levels, cycles or sub-sectors (including their progression from one grade to another).

The second major question may be formulated as follows:

? What resources are required to “produce” a graduate?

At this point of the analysis, the resources needed to produce the output of the level(s) or cycle(s) considered are not measured in terms of financial expenditure but “student-years”. This is a non-monetary measure of educational inputs: one student year stands for all the resources utilized to keep one student in school for one year.

1.2.2 Indicators

The classical basic indicators of internal efficiency are listed below. Their definition and a detailed explanation of how they are calculated can be found in Module 2 of the IIEP Self-Learning Materials on “The Internal Efficiency of an Education System”.

Assessing the student flows across the system entails the calculation of:

- Promotion rates from one grade to another.
- Transition rates from one level or cycle to the next.

The “wastage” is measured in terms of:

- Repetition rates.
- Drop-out rates.

These indicators, analyzed by educational cycle and by grade, by geographical area (“urban/rural”, “province”) and by type of school (“public/private”) will show where in the system resources are wasted. Furthermore, by analyzing the same indicators by gender and other student characteristics (e.g. the parents’ socio-economic situation), one can identify those student groups that are most affected by repetition and drop out.

A certain number of more complex efficiency indicators are often used to give managers and decision-makers additional information on:

- The retention capacity of the education system; especially the completion rate (the share of a student cohort, entering a particular education system, that actually reaches the end of this cycle), and the survival rate (the proportion of students admitted that reaches the
second and third years of that cycle – right to the final year). The survival rate, in Grade 5, is of particular interest since the pupils who have reached this level of the primary education cycle are supposed to have acquired the basic minimal competencies in literacy and in numeracy.

- The average cost per graduate in student-years (the relationship between the total numbers of student-years used up by a cohort and the number of graduates among the cohort members).

The above-mentioned indicators are calculated on the basis of what is called a cohort analysis. This type of analysis traces the flow of a group of students (usually 1,000), entering Grade 1 at the same time, through the entire educational cycle under consideration.

### 1.2.3 Interpretation of indicators

A general critical remark needs to be made here concerning some of the assumptions underlying the concept of “internal inefficiency”. This concept is obviously very restrictive and the terminology used is partly misleading; thus, repetition and drop out are certainly not the only symptoms and causes of “internal inefficiency” and “wastage” characterizing an education system. Other factors to be taken into account in an ESD are: inadequate resources affected to education, unequal distribution of human and material resources, teacher absenteeism and attrition, etc.

Furthermore, where certain parts of the population are – for cultural reasons – against sending their children to school but are nevertheless obliged to do so, it is not surprising to see many early drop-outs among the pupils belonging to this group. Hence, this phenomenon cannot be directly attributed to the “internal inefficiency” of the education system. Similarly, early drop-out of girl students may rather be the result of cultural factors (early marriage and pregnancy) and inappropriate education policies (e.g. lack of incentives and possibilities for girls to reintegrate school after their pregnancy), or too high an opportunity cost (possibility of getting income from temporary jobs).

One may even question the general idea that student drop-out generates in all cases wastage of resources. Let us take the example of pupils who drop out after having attained a “satisfactory level” of literacy and numeracy but before having completed the entire primary cycle. In a situation of scarce supply of classrooms and many children waiting for admittance to school, such “late drop-out” may not be judged too severely by the school and the education authorities.

Finally, using repetition rates to assess the internal efficiency of an education cycle may not always be the adequate thing to do: in cases where automatic promotion from one grade to the next has become the official policy or is widely practiced, it is preferable to use other indicators such as: the success rate at the end of cycle examination; the ratio of actual and official number of school days; the ratio between the real number of hours taught per week and the stipulated number of hours of teaching.

### 1.2.4 Availability of data and data collection instruments

As mentioned above, the main instrument used for the study of internal efficiency is a cohort analysis that traces the flow of students who enter the first grade of a given cycle in the same year and subsequently progress through this cycle. In theory (and subject to the type of data available), there are three kinds of cohort analysis, namely those referring to:
• “Real or True Cohorts”.
• “Apparent Cohorts”.
• “Reconstructed Cohorts”.

Analyses of real cohorts are quite rare because they require the collection and analysis of individualized statistical data (on promotion, repetition and drop-out) over a rather long period of time. This means that they tend to be costly and time-consuming.

Hence, when this kind of individualized data system is lacking, we can use, as an approximation, the data recorded during two consecutive years in the education cycle whose degree of efficiency we wish to determine. In fact, the most common practice is to reconstruct cohorts on the basis of repetition, drop-out and promotion rates, as actually reported in a given year for the different grades of the cycle studied.

The analytical devices presented above can only help to assess student flows within the system, and identify a particular problem at a given period of time. To determine possible improvements to the situation uncovered, it will be necessary to look also at:

• Trends in internal efficiency over a certain number of years.
• Pedagogical, social, economic and other possible causes of the trends or phenomena observed.

For example, where drop-out rates are found to be particularly high among certain student groups (as might be the case for girls, or pupils living in the poorest suburban areas), it may be worthwhile to undertake a sample survey on the specific teaching-learning conditions and environment of these groups.

While it would be useful to start an analysis of internal efficiency in applying the classical approach described above, also other aspects and perspectives of “internal efficiency” should be brought in. This includes “internal efficiency” assessed from the perspective of individuals or groups concerned.

1.2.5 Analyzing internal efficiency from an actor’s perspective

Again, the perspective and the focus of the diagnosis would differ, at least to some extent, if it were conducted by particular stakeholder groups or actors. For a non-governmental organization that wishes to improve schooling among children from socially underprivileged groups (e.g. rural poor), it will be important to know the rates of promotion and completion for this specific group as compared to other groups of students, and to understand the possible causes behind such reported differences, as well. However, this would require additional data collections and analyses since the relevant statistical data by social group are often not available.

Furthermore, an assessment of the “resources” required to produce a graduate of a given cycle should also consider the views of the target group, e.g. by considering the “opportunity cost” for the students who continue their studies instead of joining the labour market. Finally what may be considered as “wastage” of resources from the system’s perspective – e.g. repetition of one or several grades – may not necessarily appear as such from the perspective of the students concerned, or their families.
1.3 Analyzing equity

1.3.1 Questions

In discussing access to education, the present module has already dealt with geographical or socio-economic differences in educational opportunities. Other major questions concerning equity in education and often investigated in an ESD include:

? What differences are there between boys and girls, between urban and rural areas, among different regions and various groups or categories of the population (e.g. by income) as regards “access to education”, “progress through the system and educational achievement”, the “quality of the education acquired”, and eventual “economic support received for studying”?

? Which groups or categories of the population are the least represented among students having completed basic education? And among those enrolled in post-secondary education? Which groups are the most affected by illiteracy? (e.g. girls, children belonging to the urban poor, cultural minorities).

? What are the main causes of the stated inequities? To what extent are they linked to differences in “social demand” for education (related to income and poverty among households) or to “infrastructure barriers” related to education provision? (e.g. shortage of secondary schools in rural settings).

? Which policies and measures could help to reduce these inequities?

1.3.2 Data analysis and indicators

When examining educational inequalities through the main indicators of access, internal efficiency, and quality and so on, it is particularly important to analyse the data by:

- Gender.
- Geographical area (e.g. urban-rural; different regions).
- Socio-economic category and, if possible, ethnic origin.

A number of statistical indicators exist to measure equity in education; two rather simple but commonly applied ‘equity’ indicators are in particular the following:

- Absolute ‘gap’ or ‘deviation’: A first grasp and measurement of the existing disparities in education in a given country can be obtained in an ESD by calculating the ‘gap’ regarding certain indicators (such as primary intake, drop out or completion rates e.g.) between boys and girls, two different regions or income groups or between a specific group/region and national average values for selected indicators.

- Gender Parity Index (GPI): This indicator - which can be defined as the “ratio of female to male values of a given indicator” - is particularly useful in ESD to assess e.g. whether gender parity in terms of access to or completion of the primary cycle has been achieved in a given country.
1.3.3 Availability of data and instruments

The identification of disadvantaged groups in education requires data that are (i) sufficiently detailed, and (ii) compatible with data from other sources such as censuses or socio-economic studies. However, even detailed school statistics are usually inadequate to describe the situation of specific groups - unless they coincide with the geographical and socio-economic boundaries used in the existing statistics.

To analyse the causes of the educational situation of socially or otherwise underprivileged groups, it is necessary to conduct more detailed studies (through interviews; review of available research, etc.) of the socio-economic and cultural conditions in which these groups live, of their interests and values, and of the incentives necessary for changing their attitudes.

1.3.4 Analyzing “equity” from an actor’s perspective

A particular challenge to an Education Sector Diagnosis (ESD) is to highlight the needs and interests of the “educationally underprivileged” whose voices are hardly ever heard and, are often given less consideration by political decision-makers.

In certain cases, international organizations, supported by donors agencies, have instigated or conducted studies focusing explicitly on the situation of disadvantaged groups of the population. For instance, one such study attempted to explore measures to prevent early drop-out among girls in remote rural areas, another considered ways of making education available and more inviting to young mothers in semi-urban areas.
Questions for individual reflection:

Please refer to the most recent education sector diagnosis report available in your country and reflect on the way in which geographical disparities (by region, urban-rural) regarding access to primary education have been dealt with. In particular:

Are they given particular attention when compared to other equity issues? Are there any specific issues or problems related with ‘equity in education’ which you think, would deserve to be analysed more closely than this has been the case in this report?
PART 2. ANALYSING ACCESS, INTERNAL EFFICIENCY AND EQUITY IN ESD - EXAMPLE OF AN ESD (THE CASE OF NOVANIA)

Primary education in NOVANIA starts at 6 years of age and covers 8 years, the official age range being 6-13 years.

2.1 Analysis of access

2.1.1 Access and provision of primary schools

For many years primary education enrolment grew faster than the school-age population. Throughout the 1990s enrolment stagnated, and at the end of the 20th century the Gross Enrolment Ratio started declining; it stood at 87.6 per cent in 2005/06 (Table 1 below). Reasons behind this development are to be investigated both on the demand- and the supply-side (See Section 2.3 Analysis of Equity, below). However, the Government’s announcement of its will to introduce Free Primary Education entailed immediately a sharp increase in pupil enrolment between 2005 and 2007/08 in terms of both absolute enrolment figures and enrolment rates.

Table 1. Gross Enrolment Ratio by Gender 1996-2006

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>93.4</td>
<td>92.0</td>
<td>88.9</td>
<td>89.1</td>
<td>87.4</td>
<td>87.3</td>
<td>88.7</td>
<td>89.3</td>
<td>88.1</td>
<td>88.1</td>
<td>92.6</td>
</tr>
<tr>
<td>Female</td>
<td>89.5</td>
<td>90.0</td>
<td>86.7</td>
<td>87.8</td>
<td>86.3</td>
<td>85.5</td>
<td>86.6</td>
<td>88.2</td>
<td>87.5</td>
<td>87.1</td>
<td>91.6</td>
</tr>
<tr>
<td>Total</td>
<td>91.4</td>
<td>91.0</td>
<td>87.8</td>
<td>88.5</td>
<td>86.8</td>
<td>86.4</td>
<td>87.7</td>
<td>88.8</td>
<td>87.7</td>
<td>87.6</td>
<td>92.1</td>
</tr>
</tbody>
</table>


A study by a non-governmental organization found that in the arid and semi-arid regions of NOVANIA most schools are located far away from the communities by approximately 6-8 km. In these regions, about 98.6 per cent of the schools are concentrated in the urban centers. Long distances, coupled with insecurity in these regions, make parents in the rural areas hesitate to send their children to these urban schools, especially their daughters, for fear of exposing them to danger. Boarding schools are expensive and not very well accepted by many communities. On the other hand, most of the new schools in the rural areas lack adequate teaching and learning facilities; this affects both the quality of education and attractiveness of the schools.

When using age-specific admission and enrolment data, one can also get a picture of the capacity of the Novanian school system to admit to the first grade the population having the legal age to attend. The results of such analyses show that late school entry is a striking feature of primary education in NOVANIA. Most Grade 1 pupils are seven years old, or more, when they enroll, and only about one-third enter Grade 1 when they are six. It should be added that over-age enrolment is more frequent among girls.
2.1.2 Admission

When using age-specific admission and enrolment data, one can also get a picture of the capacity of the Novanian school system to admit in the first grade the population having the legal age to attend. The results of such analyses show that late school entry is a striking feature of primary education in NOVANIA. Most Grade 1 pupils are seven years old, or more, when they enrol, and only about one-third enter Grade 1 when they are six. It should be added that over-age enrolment is more frequent among girls.

2.2 Analysis of internal efficiency

Good progression through and retention in primary education are crucial for achieving Universal Primary Schooling (UPS) at the lowest possible cost. Since the late 1990s the Government encourages automatic promotion and aims at improving retention in primary education.

However, repetition in Grade 7 remains quite high, probably in order to allow many pupils to prepare themselves better for the examinations in the last grade. The high repetition rate recorded in Grade 1 is obviously more worrying since many of these repeaters are likely to drop out early. The high number of repeaters indicates that there is a considerable waste in NOVANIA’s system of primary education. (Tables 2 and 3 below).

Table 2. Primary School Enrolment and Flow Rates (2004)

<table>
<thead>
<tr>
<th>Grade</th>
<th>2004 Promotion</th>
<th>Repetition</th>
<th>Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>1,017,693</td>
<td>78.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Grade 2</td>
<td>983,537</td>
<td>82.8</td>
<td>13.0</td>
</tr>
<tr>
<td>Grade 3</td>
<td>877,805</td>
<td>82.8</td>
<td>12.6</td>
</tr>
<tr>
<td>Grade 4</td>
<td>844,578</td>
<td>81.5</td>
<td>13.3</td>
</tr>
<tr>
<td>Grade 5</td>
<td>749,252</td>
<td>82.7</td>
<td>12.0</td>
</tr>
<tr>
<td>Grade 6</td>
<td>683,399</td>
<td>81.6</td>
<td>12.4</td>
</tr>
<tr>
<td>Grade 7</td>
<td>679,194</td>
<td>76.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Grade 8</td>
<td>479,164</td>
<td>93.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>6,314,621</td>
<td>81.9</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Table 3. Repetition Rates by Grade and Gender in 2004 (percentages)

<table>
<thead>
<tr>
<th>Repetition by Grade and Gender</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>18.0</td>
<td>16.5</td>
<td>17.2</td>
</tr>
<tr>
<td>Grade 2</td>
<td>13.2</td>
<td>12.8</td>
<td>13.0</td>
</tr>
<tr>
<td>Grade 3</td>
<td>13.2</td>
<td>11.9</td>
<td>12.6</td>
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<tr>
<td>Grade 4</td>
<td>13.7</td>
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<td>Grade 5</td>
<td>12.1</td>
<td>11.9</td>
<td>12.0</td>
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<td>Grade 6</td>
<td>12.3</td>
<td>12.5</td>
<td>12.4</td>
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<tr>
<td>Grade 7</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Grade 8</td>
<td>4.3</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13.5</td>
<td>12.9</td>
<td>13.2</td>
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The size of the problem becomes even more apparent when using a “Cohort Flow Analysis” (Table 4 below)

Table 4. Cohort Flow Analysis through Primary Education in 2003/2004

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Grade</td>
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<td>17</td>
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<td>2</td>
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<td>5</td>
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<td>65</td>
<td>28</td>
<td>8</td>
<td>2</td>
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<td>3</td>
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<td>30</td>
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<td>11</td>
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<tr>
<td>Graduate</td>
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<td></td>
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<td></td>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>

This Cohort Flow Chart, constructed by using grade-specific repetition and drop-out rates for 2003/2004, shows a global completion rate of 52 per cent and indicates that only 21 per cent finished the primary cycle on time. The average number of years to complete the cycle was estimated at 9 years.

The prospects for those who abandon their studies at various stages of the primary cycle are bleak. The existing network of non-formal education institutions cannot cater for all of them. Furthermore, the relevance of the programmes delivered by non-formal education centres is questioned by many. At present, the support and supervision from the Ministry of Education is very limited.

2.3 Analysis of equity

According to the census the share of the population which never attended school shows a gradual decline and stood at 32 per cent in 2002. The difference between girls and boys has also diminished over the years and the gender gap is now negligible in the age groups 6-13 and 14-17. However, by age 30+ the gap widens drastically: A total of 43 per cent of girls never attended school compared to 21 per cent of boys. The results also indicated that the Northern Province had the highest proportion (78 per cent) of the population aged 18-24 years who had never attended school. The corresponding figure for the Central Province was 1.5 per cent.

While, the difference in enrolment between boys and girls is, on average, negligible, remaining disparities appear when analyzing enrolment by province and gender (Table 5 below).

Table 5. Gross Enrolment Ratio (percentages) in Primary Education by Province and Gender in 2005

<table>
<thead>
<tr>
<th>Province/Gender</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal</td>
<td>77.5</td>
<td>65.6</td>
<td>71.6</td>
</tr>
<tr>
<td>Central</td>
<td>104.8</td>
<td>107.3</td>
<td>106.0</td>
</tr>
<tr>
<td>South-East</td>
<td>95.1</td>
<td>98.6</td>
<td>96.9</td>
</tr>
<tr>
<td>Novoto (Cap)</td>
<td>53.7</td>
<td>50.4</td>
<td>52.0</td>
</tr>
<tr>
<td>Lake</td>
<td>90.6</td>
<td>85.9</td>
<td>88.3</td>
</tr>
<tr>
<td>Wanga</td>
<td>89.4</td>
<td>97.1</td>
<td>93.3</td>
</tr>
<tr>
<td>Novanza</td>
<td>95.4</td>
<td>92.6</td>
<td>94.0</td>
</tr>
<tr>
<td>Northern</td>
<td>22.5</td>
<td>12.3</td>
<td>17.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>88.1</td>
<td>87.1</td>
<td>87.6</td>
</tr>
</tbody>
</table>


The table mirrors two very contrasting situations: in the Wanga Province the Gross Enrolment Ratio and the percentage of girls enrolled is high; in the Northern Province where a high proportion of the Nomad populations live, the boys' share is twice as high as the girls' and the overall enrolment level is low.
The NOVANIA Poverty Study in 2003 indicated that the four main reasons for not attending school, according to a “sample” of parents, were “the inability to afford it”, “early marriage”, “failure in examinations”, and “school being uninteresting”. In view of the relatively high contribution of households to the total cost of primary and secondary education in NOVANIA, it is hardly surprising that “non-affordability” was the most cited reason for non-school attendance. The survey revealed some interesting differences between poor urban and rural households: the latter indicated more often as “school being uninteresting” and “failed examinations”, whereas poor urban parents ranked “early marriage” as the second most important factor after “non-affordability”.

NOVANIA is also facing certain disparities in completion of primary schooling and education attainment. The proportion of girls completing primary education is four points lower than that of the boys. Moreover, primary school completion rates are varying to a very large degree between boys (56.8 per cent) and girls (48.5 per cent) among the different regions, from 76 per cent in the Coastal Region, to 35 per cent in the Capital and only 9 per cent in the Northern Region.

The gap in grade attainment between children with different socio-economic backgrounds is also very significant: 60 per cent of the children from families of the lowest two income groups reached Grade 8, compared with over 75 per cent of the children from the richest income groups.

As regards transition to secondary education, only 40 per cent of those who completed primary education entered the secondary cycle. The percentage of boys who continued was slightly higher than that of girls.

2.4 Analysis of post-primary education

2.4.1 Access and coverage in post-primary education

Enrolments in secondary education rose from 30,000 students in 1963 to over 600,000 in 2006. However, the GER for the secondary sub-sector declined from 29.4% to 22.2% between 1992 and 2006. One of the constraining factors for secondary school enrolment is the limited number and spread of secondary schools to match that of primary schools. If there is insufficient or no access to secondary education, children from low-income homes may be incited by their families to drop out of primary education before completing the cycle.

According to the NOVANIA Poverty Study in 2006, the decline in the secondary school enrolment rate since the mid-90’s is due to the high private cost of schooling and poverty. The average annual unit cost for secondary education is indeed 5 times higher than primary education. Other reasons are an unfriendly school environment, failure in examinations and early marriage.

At the formal secondary and post secondary education level, there are also nearly 700 TVET institutions with an overall enrolment of 79,000 in 2006. Every year less than a half of those graduating from the primary schools either join the Youth Polytechnics for artisan training or enrol directly for apprenticeship training most of which are located in the informal sector. TVET programmes at the secondary level are terminal with few options for further training. Including private sector and non formal training programmes, over 300,000 students annually enter some form of TVET training, according to data from the Ministry of Labour.
2.4.2 Analysis of internal efficiency in post-primary education

Due to the policy of automatic promotion, repetition rates are relatively low in general secondary education (estimated at around 2% in 2006). However drop out rates at this level are very high. No reliable official statistics on this issue are available but a representative survey carried out in 2006 reveals an overall dropout rate of around 26% at secondary level.

2.4.3 Analysis of equity in post-primary education

At the post-primary level gender disparities in participation and internal efficiency increase in comparison to primary education. Since the late 1990s girls’ transition rate from primary and gross enrolment ratios in general secondary education are always some 2 to 3 points lower than that of boys.

In the Novanian Certificate of Secondary Education, girls and boys do show a relatively similar academic performance levels. Girls drop out somewhat more easily of school than boys, while they repeat less than boys.

Table 6. Performance in Novanian Certificate of Secondary Education by gender, 2006

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mean % female</th>
<th>Mean % male</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>34,71</td>
<td>34,44</td>
</tr>
<tr>
<td>Novanian</td>
<td>44,72</td>
<td>43,34</td>
</tr>
<tr>
<td>Maths</td>
<td>15,83</td>
<td>21,20</td>
</tr>
<tr>
<td>Biology</td>
<td>29,52</td>
<td>34,48</td>
</tr>
<tr>
<td>Physics</td>
<td>22,22</td>
<td>26,84</td>
</tr>
<tr>
<td>Chemistry</td>
<td>29,39</td>
<td>23,41</td>
</tr>
</tbody>
</table>

Source: National Examinations Council, 2007

Regional disparities have been and still are rather prominent in secondary school enrolments. The Central region has the highest GER at 37,7%, the Northern region the lowest at 4,5 % (see Table 9).
Table 7. Gross Enrolment Ratio (percentages) in General Secondary Education by Province and Gender in 2006

<table>
<thead>
<tr>
<th>Province/Gender</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal</td>
<td>15,6</td>
<td>13,2</td>
<td>14,4</td>
</tr>
<tr>
<td>Central</td>
<td>35,6</td>
<td>38,8</td>
<td>37,7</td>
</tr>
<tr>
<td>South-East</td>
<td>23,2</td>
<td>23,4</td>
<td>23,3</td>
</tr>
<tr>
<td>Novoto (Cap)</td>
<td>15,1</td>
<td>9,4</td>
<td>11,8</td>
</tr>
<tr>
<td>Lake</td>
<td>20,2</td>
<td>16,4</td>
<td>18,3</td>
</tr>
<tr>
<td>Wanga</td>
<td>26,2</td>
<td>23,9</td>
<td>25,1</td>
</tr>
<tr>
<td>Novanza</td>
<td>26,7</td>
<td>20,2</td>
<td>23,5</td>
</tr>
<tr>
<td>Northern</td>
<td>5,8</td>
<td>2,9</td>
<td>4,5</td>
</tr>
<tr>
<td>Total</td>
<td>23,5</td>
<td>20,9</td>
<td>22,2</td>
</tr>
</tbody>
</table>

Source: Ministry of Education, 2007

2.5 Analysis of Non-formal education

Despite the introduction of Free Primary Education in 2005, there are an estimated 1.7 million children and youth who have not yet got access to education through formal schools. This problem is particularly severe in informal urban settlements and remote rural areas and concerns vulnerable groups such as child workers, orphans, nomadic children, and street youth. It is through support to non-formal schools and education centers that the Government hopes to attain some of the “hard-to-reach” groups in urban slums.

The Non-formal Schools (NFSs) mainly target out-of-school youth between age 6-13, follow the formal curriculum (but may deviate from conformity rules regarding uniforms, learning facilities etc.) and are often supported by local communities and NGOs. The Non Formal Education Centers (NFEs) target school-age children and youth below 18 years who cannot attend formal schools. Their teaching may be based not only on the Ministry of Education’s NFE curriculum but also on other programmes. Its quality varies from very good to poor. Many of the children learning in these schools or centers have not benefited from the Free Primary education policy. There are also significant regional imbalances in the provisions of NFE.

Due to the diversity in NFE provision, there is no regular, accurate enrolment account. In 2007, there were 1,535 NFE institutions in the country with significant regional differences: more than 40% were located in the province of the capital, and, accordingly, the province of Novoto also recorded the highest student enrolment (100,100) and number of teachers (6,520). Given the scarcity of NFE institutions particularly in the northern and eastern parts of the country, it is not surprising to find very low enrolments and pupil/teacher ratios (less than 10 pupils per teacher). Most of the teachers (2/3) in these institutions are still untrained.

The Government plans to also offer alternative transition mechanisms for youth and adults to access secondary education (e.g. alternative secondary curriculum for learners in non-formal schools where basic science laboratories are not available).
Group Activity:

Please review the sections on “Access, Internal Efficiency and Equity” of the sub-sector analysis and prepare a draft response to the questions below. Then hold a meeting with your colleagues to discuss your individual responses and to prepare the Group Response Report to be sent to IIEP.

1. What indicators are missing in the text presented to evaluate primary education in NOVANIA from the following angles?
   - Access
   - Internal efficiency

2. Concerning equity:
   (a) What indicators are used to assess primary education from the angle of “equity”?
   (b) Which groups or categories are the least represented among students having completed primary education?
   (c) What do you think are the main causes of the observed inequities?

3. What are (a) the main achievements and (b) problems concerning post-primary education in Novania from the following angles?
   - Access
   - Internal efficiency
   - Equity

4. For Non-Formal Education to contribute to attain quality EFA, what are, in your view, the main opportunities and challenges ahead: (i) In Novania and (ii) in your own country?
Bibliographical References


UNIT 4. ANALYZING QUALITY OF EDUCATION AND EXTERNAL EFFECTIVENESS

Improving the “internal efficiency” of an education system, or cycle, by enhancing the progression of the pupils/students across the different grades does not necessarily mean that the quality of teaching and learning also has improved, and that what students have learnt will be useful for their future individual well-being and for the development of the country as a whole. However, the ‘quality of education’ and its ‘external effectiveness’ obviously constitute two crucial concerns when reviewing and reforming a country’s education policy which deserve particular attention and analysis in an ESD.

Unit 4 deals with these two important areas or ‘angles of analysis’ of educational development.

Part 1 provides an overview of the main issues related to the ‘quality of education’ and its ‘external effectiveness’ commonly investigated in an ESD and the indicators and instruments used for this purpose. Among other aspects the current meanings and measures of “quality of education” and how to achieve the related targets are explained and discussed; similarly the concept of “external effectiveness” of education which has until recently been largely reduced, to the economic benefits that a given type or programme of education yield to its individual beneficiaries and to the society as a whole – in relation to the resources invested.

Part 2 is again devoted to a practical exercise. It pursues the work on the case of NOVANIA started in Unit 2 and 3, and invites you in particular to consider and draw lessons from the way in which the “quality” and “external effectiveness” of education are addressed in the presented example of an ESD.

Unit objective:
The central aim of this unit is to provide you with the knowledge and skills required to assess the ‘quality’ and ‘external effectiveness’ of an education system or one of its sub-systems in an ESD.

Unit content:
- Analysis of Quality and External Efficiency Aspects in an ESD;
- Example of an Education Sector Diagnosis (the case of ‘Novania’).
Expected learning outcomes:
Upon completion of Unit 4 you should be able to understand:

- identify the relevant data, indicators and instruments for analyzing the quality of education;
- identify the relevant data, indicators and instruments for analyzing the external effectiveness of an education system;
- assess the strengths and limits of the indicators and research instruments selected for such analyses in an ESD.

Timeframe:
- The group study time required for this module is approximately 8 hours per week.

Questions for individual reflection:
In this unit, you will be asked to answer individual questions for reflection in connection with the explanations provided in Part 1.

Group Activity:
At the end of the unit, you will work with your colleagues on a group activity related to Part 2. This activity will ask you to critically assess and learn from the way in which major aspects of the quality and external effectiveness of education have been addressed in the ESD example of Novania presented here.

Reading:
For this unit you are asked to read the following publication:

  [www.efareport.unesco.org](http://www.efareport.unesco.org)
PART 1. ANALYSIS OF THE QUALITY OF EDUCATION

1.1 Analyzing the quality of education

1.1.1 Introduction

Educational decision-makers all over the world have become more and more concerned with improving not only the “quantity”, but also the “quality” of educational provision. This new direction is clearly reflected in one of the main goals (Goal N°6) of the Framework for Action adopted at the World Education Forum on Education For All (EFA) which took place in April 2000 in Dakar, Senegal.

“Improving all aspects of the quality of education and ensuring excellence of all, so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills”. (UNESCO, 2000:43)

This quotation also underscores the importance of assessing the results attained in terms of student learning or the quality of the product. Up until the end of the 1980s, evaluations of the effectiveness of education systems focussed on education inputs such as the quality of the material and human resources available. The change in mentality and awareness among key actors, which was already noticeable at the first World Forum on EFA in Jomtien, Thailand in 1990, was confirmed and amplified in Dakar ten years later. Therefore, more and more education sector diagnoses are paying special attention to the quality of the educational output.

The results of schooling (the outputs) are linked to a number of factors in the school environment or the context of learning, to the human and material resources available for instruction (the inputs), and, of course, to the teaching-learning process itself. The relationships between these four major dimensions when analyzing the quality of education of a school, or an entire education system, are depicted in models based on the System Theory. The example given in Figure 1 below is taken from Scheerens (2000).
Figure 1. A basic systems model of school functioning

There are a number of operational definitions of what “quality of education” means. According to a UNICEF (2000) document elaborated in the context of Education For All (EFA), quality education would include characteristics such as:

- Learners who are healthy, well-nourished, ready to participate and learn while being supported wholly by their families and communities.
- Healthy, safe and gender-sensitive environments with adequate resources and facilities.
- Relevant curricula and materials for basic skills in literacy, numeracy, life skills and relevant knowledge in such matters as HIV/AIDS prevention, gender equity, peace and nutrition.
- Processes through which trained teachers use child-centred approaches in well-managed classrooms and skilful assessments to facilitate learning and reduce disparities.
- Outcomes that encompass knowledge, skills and attitudes, positive participation in society and are linked to national goals for education.

We shall hereafter examine in more detail three of the four main dimensions that are usually analyzed in a sector or sub-sector diagnosis.

1.1.2 Output characteristics

Questions

First, let us look at questions relating to the quality of the outputs. Increasingly, education sector diagnoses use results from student achievement tests to answer the key question:

? What knowledge and skills have pupils/students acquired in the core subjects of the curriculum?

Such tests often concentrate on reading, writing and arithmetic at the primary level, and mathematics, science and languages at the secondary level. It is more difficult to find studies that have evaluated the attainment of other equally important objectives such as:
What kind of attitudes and behaviours (e.g. sense of responsibility towards other pupils, sociability etc.) have the students actually acquired?

Other learning objectives often referred to in the context of Education for All include:

- The ability to demonstrate autonomy in learning.
- The ability to provide care for illness and infection, and knowledge leading to more effective health and hygiene behaviours.
- Life skills, both psychosocial and interpersonal, providing better knowledge of such matters as HIV/AIDS prevention and avoidance of the use of drugs.

These goals are essential for individual and social development but they are much more difficult to measure than the objectives of cognitive achievement.

**Indicators**

Frequently used output measures and indicators involve:

- Pass rates at national examinations.
- Average scores obtained by students in different subjects at national examinations.

In recent years, on the one hand, sector studies have given more attention to:

- Achievement scores resulting from standardized assessment tests conducted for purely evaluative purposes (e.g. disconnected from examinations).

On the other hand, measurements of the attitudes and social behaviour acquired by school leavers tend to be absent in most sector studies.

### 1.1.3 Input characteristics

According to the prevalent views among experienced educators, the main inputs to be considered in education quality analyses are teachers, textbooks and curricula. In certain cases, generally where the material conditions of schooling are particularly bad, Education Sector Diagnosis (ESD) also considers the condition of school buildings and equipment and their possible impact on educational processes and output. You will find below some central questions related to educational inputs that are commonly explored.

#### 1.1.3.1 Teachers

**Questions**

- How many years of professional experience do teachers in primary education etc. have on average? How many are fully trained? How many have received in-service training? What is the proportion of female teachers?
- What are their living conditions? How motivated and committed are they?
- What are their career prospects?
- Is the teaching staff fully utilized? How often are teachers absent from schools?
- How much are teachers involved in the management of their schools?
How are the relations between the teachers and the local community?

Indicators

- Teaching staff by type of qualification (percentage of qualified teachers), and by level of educational attainment.
- Teaching staff by gender and age.
- Teaching staff by status, length of service.
- Teacher/pupil ratio.
- Teacher utilization indicators such as, teacher distribution by teaching load, percentage of teachers teaching in multi-grade and/or double-shift classes.
- Rate of teacher absenteeism.

1.1.3.2 Curriculum

Questions

- To what extent do the curriculum objectives reflect major changes in a country’s economic, social and cultural policies that have taken place over the last two decades?
- Are the content and organization of the curriculum in line with the objectives and actual conditions of learning?
- To what extent does the curriculum foresee or allow adjustments to the specific values or rights of minority groups?
- How are the curriculum developed, disseminated, implemented and evaluated? What is the role of the teachers in these processes?

Indicators

- Curriculum aims and objectives.
- Recommended teaching-learning methods.
- Number of teaching hours set aside for core subjects according to the official curriculum.

1.1.3.3 Textbooks and instructional materials

Questions

- Are the contents of the textbooks in alignment with the curriculum?
- How many pupils/students possess the main textbook(s)?
- How many teachers possess teachers’ guides and other teaching materials?
- How are the textbooks and other instructional materials developed and tested? What is the role of teachers in this exercise?
- How is the production and distribution of textbooks organized?
Indicators

- Number and (actual) availability of textbooks per pupil.
- Number and (actual) availability of teacher guides per teacher (or per school).
- Delays in textbook distribution.

1.1.3.4 School buildings, facilities and equipment

Questions

? In what state are the school buildings and the basic infrastructure (latrines/toilets, running water, electricity)?

? How many classrooms are equipped according to the norms (with blackboards, tables, desks, chairs, etc.)?

? How many schools possess a school library and/or other learning facilities (e.g. computers) for students’ use?

Indicators

Indicators often used for assessing the current condition of facilities and equipment include:

- State of school buildings (for example: “good”, “to be renovated”, “to be rebuilt”).
- Average surface area by schools, and by pupil.
- Percentage of schools equipped with electricity, drinking-water, toilets, etc.
- Percentage of schools having a school library, at least one full set of the recommended teacher guides and other teaching materials.
- Utilization rate of classrooms, in terms of time and space.

1.1.4 Characteristics of the teaching-learning process

The teaching-learning process is at the very heart of the matter. Policy analysts and planners used to call it “the black box” since they usually did not dispose of “true” assessments of what really took place during the teaching-learning processes in the classroom. To “capture” this very complex process requires special research studies with rather sophisticated methodologies. Most sector diagnoses do not include such studies; even if funds for hiring a team of researchers with the required expertise are available. The time needed for completing such an investigation often goes beyond the duration of an Education Sector Diagnosis (ESD). Hence, a sector analysis usually has to rely on the results taken from previous research on teaching-learning processes, which are already available, on the country studied. However, such studies are not very common in developing countries, and ESD can be an opportunity to fill this knowledge gap through classroom observation studies, e.g. in a small (non-representative) sample of schools and classes.

Fortunately, there is, today, a large body of evidence from international surveys and research studies on factors in the teaching-learning process that are essential for what students actually
learn at school. And such empirical results, presented within a structured framework [see for instance the previously mentioned work by Scheeren, 2000], can also be quite useful for national planners and ESD analysts in selecting key issues to be investigated and indicators for regular monitoring.

Analyses of the qualitative aspects of educational processes need to pay particular attention to factors that have proved to have great impact on pupil achievement, such as:

- The real time spent by the teacher on a given subject (“Time-on-task”).
- Teacher-student interaction.
- Pupil and teacher time spent on homework and its correction.
- Adequate continuous pupil assessment.
- Teacher and school supervision and support services.

Questions

The following are common questions related to the above-mentioned factors:

？ How do teachers teach in class? (e.g. extent to which they use pupil-centred teaching, importance given to learning in small groups)?

？ What are the practices regarding homework, correction and feedback given to pupils?

？ Do teachers receive adequate training and support in the area of pupil assessment?

？ How is the professional and administrative supervision of teachers and schools organized? How much and what kind of support do teachers receive from inspectors? Who else is providing pedagogical support?

Indicators

The collection and analysis of relevant data relating to the following indicators (the list of which is far from being complete) are very useful although a significant amount of time and resources may be required:

- Number of actual teacher-student contact hours per week (and school year), and by subject if available.
- Absenteeism of teachers and pupils.
- Frequency of homework given and corrected.
- Provision of teacher training and guides in the area of pupil assessment.
- Frequency of inspections/supervisory visits, per teacher if available.
- Frequency of teacher contacts with other advisory bodies.
- Availability and location of teacher resource centres.
- Management style of school heads.
1.1.5 Availability of data and data collection instruments

The commonly used “input” indicators tend to be exclusively factual and cover only those aspects that are easy to measure e.g. the following:

1. The availability or non-availability of textbooks (but disregarding the relevance of the contents and quality of presentation, illustrations etc.).

2. Teachers having or not having a teacher-college degree (but with no indication of the curriculum used nor the quality of the education/training received).

3. Number of pupils per class (but without considering teaching methods used or the interaction between teacher and pupils, or among pupils themselves, etc.).

Process and output indicators provide better “proxy” indications of the more qualitative aspects of educational provision. As regards assessment of student achievement, an ESD can use examination pass rates, and examination scores. Since the latter are generally standardized and do not indicate the actual level of student learning, it is worthwhile to include results from pupil achievement tests which are not biased by the particular conditions of high-stake examinations.

When properly designed, such tests can be used not only to assess average student achievement levels in the subject areas tested, but also to get a reasonably reliable indication of the degree to which certain objectives of the curriculum have actually been attained (for instance the students’ acquisition of “reasoning and analytical skills”). The tests can also be used to identify the student groups that are significantly below or above the average achievement level.

Moreover, it is always useful to analyse the relationship between the examination or test scores and a number of factors relating to either pupil/student background, e.g. gender, residential area (rural/urban), parental socio-economic situation, or the provision of education, e.g. teacher qualification, teaching-learning practices, condition of school buildings and classrooms etc.

When quantitative data do not provide adequate insight of actual teaching practices, techniques of qualitative analysis can be employed: classroom observations, interviews with parents, students and teachers, and analysis of school inspectors’ reports.

Research studies or surveys (based on samples of schools and students) often employ multivariate statistical analyses to evaluate the relative impact on pupil achievement of such factors. Certain sector diagnoses have included analyses or rough assessments of the cost implications and possible effectiveness of different factor-combinations for quality improvement; such studies or assessments can facilitate policy choices among different strategic options.

In any case the mentioned studies of the quality of education can, provided their results are interpreted with caution, form a more objective basis for appraising the impact of different educational inputs than the sheer opinion of educators. It should be noted, however, that conclusions on priority measures for quality improvement are essentially country-specific and not universally applicable.

1.1.6 Analyzing quality from an actor’s perspective

Most actors and groups in the education sector are interested in enhancing at least some of the aforementioned aspects of educational quality. However, they do neither always share the same concerns nor do they have the same opinion of what measures would actually lead to improved quality of education.
Teachers (and not the least teachers’ unions), may argue that an ESD should, first of all, focus on their working and living conditions, their need for training and support, since in the absence of such information one should not expect any improvement of the teaching process and in enhanced student learning.

Another example concerns the introduction of a new teaching model or approach. Such a reform may signify that the teaching will be more “student-centred”, be based on more individual initiative and student participation, and make the learners more motivated and improve their achievements. But such a change may be perceived by many parents (and perhaps many teachers) and religious bodies, as a deterioration rather than an improvement of educational quality e.g. the introduction of such “individualistic” pedagogical approaches could – in certain contexts – be considered as jeopardizing common norms and values regulating their social and cultural life.

Questions for individual reflection:

How would you define the ‘quality of education’?
1.2 Analyzing external effectiveness

1.2.1 Introduction

In theory, the external effectiveness of an education system should be assessed in terms of its contribution to the economic and social development of a country. In practice, it has proved difficult to estimate with accuracy the contribution of education to economic growth.

Moreover, an ESD should not confine itself to assessing “effectiveness and efficiency” of education only from a pure economic point of view, but also consider the effects on the social well-being of the population on the country’s natural environment etc.

Sector and sub-sector diagnoses, therefore, tend to tackle external effectiveness by studying the fit between educational provision, on the one hand, and the country's need of human resources for its social and economic development on the other. Special attention is usually given to the linkage between education/training and the labour market.

Some of the questions frequently asked include:

**Questions**

? To what extent do the numbers and profiles of school leavers/graduates match the human resource requirements of the modern sector of the economy? What trends can be expected in the near future in this respect?

? Do education and training prepare school leavers/graduates for integration into the modern sector of the labour market?

? To what extent do education and/or training respond to the human resource needs of the traditional (agriculture) sector and the informal sector? What competencies, skills and knowledge are required for the development of these sectors?

? What is done to prepare young people for self-employment?

? How does the present system of education and training contribute to improving family planning, the environment and the conditions of health, nutrition and hygiene of the population?

**Indicators**

Some of the major indicators useful to an analysis of the first question above include:

- The structure of employment, by sector, “occupation” and employment “status”.
- The present education and training profile of the employed population by sector, employment status and occupational group, and recent trends (the last 10-15 years).
- The correspondence between the level, type (general-vocational) and specialization of education and training of school leavers and university graduates, on the one hand, and the knowledge and skill requirements in the modern sector of employment, on the other hand.
Indicators relating to the second question include the following:

- The rate and duration of unemployment by level of education, by type and specialization of education and training, and their evolution over the last 5-10 years.

The following indicators refer to the needs of human resources in agriculture and the informal sector:

- The present and estimated future size of the agriculture and informal sectors, both in absolute and relative terms.
- The education and training profiles of those employed in the informal sector in terms of their level and type of education and training, and their specialization.
- The expectations of employers in the informal sector with regard to the desired education and training profile of their employees.

The expected needs of human resources for self-employment are usually estimated by analyzing the evolution of employment in recent years according to sector (formal – non formal) and status of employment and occupational category.

Finally, the relationship between education and poverty and more generally between education and the country’s development in terms of well-being (social, environmental etc) have been given increasing attention by policy makers as well as in ESD over recent years; these relationships are often assessed through the following indicators:

- The relevance and adequacy of the content of curriculum taught at different levels and in different sub-sectors, with respect to the country’s actual social, health, environmental conditions etc.
- The statistical impact of the level of formal education attained (particularly by women) on fertility rates, nutrition, health, etc.
- The statistical impact of the level of formal education of the population considered (in a given country, in its different provinces, etc) on aspects of poverty such as (daily) household income or expenses, individual perception of poverty and well-being.

1.2.2 Availability of data and data collection instruments

In the early days of human resource planning, it was thought that one could forecast, rather precisely, the number of graduates in each discipline needed for economic growth. Comparisons of these forecasts with reality have made planners more cautious in this regard.

Today, less ambitious studies are used in ESDs to analyse the match between education and training, and employment. Among the most common research instruments applied, are the following:

- Analysis of the employment, the occupational structures and their evolution linked to technological change.
- Statistical studies on unemployment of graduates.
- Follow-up surveys of school leavers and university graduates (tracer studies).
- Employer surveys: evaluation of the output of the education system assets and shortcomings; additional training that had to be provided by the employer, etc.
• Studies on the links between education and manpower productivity in various occupations.

It is also important to study how the production and technology in various sectors are likely to evolve in the short and medium-term, and what changes this may lead to regarding job structures and skills requirements. This may encourage decision-makers to undertake adjustments of the curricula both in general education programmes and in technical and vocational training.

It is also essential to forecast the relative size of the modern, the traditional and the informal sectors over the coming 15 to 20 years. This requires projections that bring together demographic forecasts, production growth rates by sector, and probable changes in productivity, in order to derive the broad employment trends.

For the least-developed countries (LDCs), very often agriculture and the informal sector of the economy will continue to provide the great majority of employment opportunities.

In view of the demonstrated strong relationship between literacy/numeracy level and the productivity of farmers and workers in the informal sector, decision-makers may give more clearly priority to basic education for all. Studies on the external effectiveness of basic education may also instigate a review of agricultural support services or training.

A sector analysis provides a good opportunity for the country concerned to make a critical assessment of the relationship between training and employment, and not the least, to increase the awareness of the links between productivity, employment and poverty, and the role of education in the struggle against poverty.

1.2.3 Analyzing “external effectiveness” from an actor’s perspective

The point of view of employers is generally given considerable weight in analyses of “external effectiveness” within an Education Sector Diagnosis (ESD). It is much less common, however, to find the “external effectiveness” of education programmes and training institutions being evaluated by the majority concerned, i.e. the school leavers and graduates.

Although “tracer studies” are sometimes carried out in order to assess the actual professional career path of graduates as well as their view of the match between present job requirements and their former training, many legitimate issues from their point of view tend to be neglected, such as:

? To what extent has education contributed to the development of self-confidence, sociability and other major “assets” for their integration into working life?

? Do young graduates estimate that the education and training they received helped them to address the current challenges of family and social life?

With the recent increased interest of governments and aid agencies in poverty reduction strategies, sector-wide and inter-sector analyses of Human Resource Development (HRD) may also give more room to the points of view of non-governmental organizations (e.g. rural women associations) on the role of education and training in combating unequal employment opportunities, income distribution and eventually poverty.
Questions for individual reflection:

Which major issues relating to the external effectiveness of (i) primary and (ii) general and vocational secondary education have been considered in recent Education Sector Reviews or PRSP reviews (published over the last 5 years) in your country? Which important aspects of external effectiveness have these documents left out or neglected?
PART 2. ANALYSING THE QUALITY AND EXTERNAL EFFECTIVENESS OF EDUCATION IN ESD - EXAMPLE OF AN ESD (THE CASE OF NOVANIA)

2.1 Primary education

2.1.1 Quality of primary education: educational inputs

2.1.1.1 Curriculum

The current primary education curriculum has 13 teaching subjects comprising Novani, the national language spoken by the majority of the citizens, English, Mathematics, pre-vocational subjects including agriculture, craft, home science, and business education. Emphasis is also laid on the development of values and attitudes through courses of Civic Education, Music and Art. There are seven subjects under examination in the NOVANIA Certificate of Primary Education.

2.1.1.2 Teachers

The evolution and distribution of the teaching force

In 2005/06 there were 178,000 teachers for 5.9 million pupils, and hence a pupil/teacher ratio of 33:1. But the national average hides significant differences across regions and districts, ranging from 21:1 in some remote rural areas to 50 pupils per teacher in some of the suburbs of the capital. Following the announcement of the abolition of school fees in 2005 and the subsequent sharp enrolment increase, the pupil/teacher ratio has gone up to 38:1

Table 1. Pupil/teacher ratio, number of classrooms, number of teachers and pupil-classroom ratio in primary schools by province in 2005/06

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of teachers</th>
<th>Pupil/teacher ratio</th>
<th>Number of classrooms</th>
<th>Pupil-classroom ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal</td>
<td>10,729</td>
<td>35,7</td>
<td>10,064</td>
<td>45.8</td>
</tr>
<tr>
<td>Central</td>
<td>23,917</td>
<td>33,2</td>
<td>27,455</td>
<td>31.0</td>
</tr>
<tr>
<td>South East</td>
<td>37,008</td>
<td>30,4</td>
<td>40,889</td>
<td>31.5</td>
</tr>
<tr>
<td>Novoto (Cap)</td>
<td>4,030</td>
<td>33,7</td>
<td>4,087</td>
<td>47.5</td>
</tr>
<tr>
<td>Northern</td>
<td>1,301</td>
<td>43,8</td>
<td>1,590</td>
<td>40.5</td>
</tr>
<tr>
<td>Novanza</td>
<td>30,983</td>
<td>32,7</td>
<td>34,197</td>
<td>37.5</td>
</tr>
</tbody>
</table>
In 2006 there was also a break with a longstanding tradition of centralized teacher management when the Government decided to decentralize teacher employment; primary teachers are now employed (on the basis of teacher demand planning at national level) by districts and schools. This reform which also included the introduction of special allowances for teachers in hardship areas was launched to address the problem of understaffing in certain districts and schools of the country.

**Teachers, their training and deployment**

No less than 98 per cent of the primary school teachers in NOVANIA were formally qualified teachers in 2006. To qualify as a primary school teacher trainee in NOVANIA, 12 years of schooling are required (8 years of primary and 4 years of secondary education). The pre-service teacher-training course provided at the Technical Training Colleges (TTCs) takes 2 years and covers all the 13 subjects that are taught in primary schools. All teacher-trainees must pass a period of teaching practice in order to qualify for certification. However, teacher training does not comprise a formal professional training component on teaching methodology, classroom management (including multi-grade or large class teaching), monitoring of student achievement and communication with parents and colleagues.

**Table 2. Number of primary teachers by qualification 2002-2006**

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained</td>
<td>176,034</td>
<td>185,736</td>
<td>180,164</td>
<td>173,008</td>
<td>177,752</td>
</tr>
<tr>
<td>Untrained</td>
<td>10,556</td>
<td>6,570</td>
<td>6,448</td>
<td>5,894</td>
<td>3,108</td>
</tr>
<tr>
<td>Grand total</td>
<td>186,590</td>
<td>192,306</td>
<td>186,612</td>
<td>178,902</td>
<td>180,860</td>
</tr>
</tbody>
</table>

Source: Ministry of Education, 2007

The average annual salary of a Novanian primary school teacher is about 3.5 times the GDP per capita in 2006.

A survey undertaken by the National Institute of Education (NIE) provides some interesting additional information on teacher characteristics in 2006 (Grade 6 Reading teachers). The average Grade 6 teacher was 37.6 years old. The average age ranged from 32.1 years in the Northern Province to 40.9 years in the Novanza Province. The teachers had, on average, 14.0 years of teaching experience. This pattern was fairly uniform across the country but with the significant exception of the Northern Province where the teachers had, on average, been teaching for only 8.0 years.
Regarding the gender distribution of teachers, it is interesting to note that at the national level 46 per cent of the Reading and 25 per cent of the Mathematics teachers were female; differences between provinces are ranging from 93.5 per cent in the capital to 33 per cent in the Northern Province.

**Instructional materials**

More than 95 per cent of the recurrent expenditure of the primary education budget went to teacher salaries and allowances. The Ministry's contribution to the financing of textbooks and other learning materials was very limited; most of this financial responsibility was given to the parents.

The implications of this policy came out very clearly in the above-mentioned survey by the National Institute of Education (NIE): about 75 per cent of the Grade 6 pupils indicated that textbooks were not available (The situation in Novoto, the Capital, differed from the rest of the country: “only” 43 per cent of the pupils reported a shortage of textbooks). Unfortunately, few school libraries were able to provide access to more textbooks. Therefore, teachers had to spend time copying material from their textbooks onto the blackboard, and pupils then had to recopy the blackboard material into their exercise books. In addition to the shortage of textbooks, and according to the same survey, other instructional materials such as exercise books, notebooks etc. are also lacking.

**Table 3. Availability of textbooks, 2006**

|                | % report lack of textbook |          |          |
|                |                          | Mean     | Standard Deviation (St. D.) |
| Coastal        | 76.2                     |          | 5.3       |
| Central        | 76.1                     |          | 4.33      |
| South-East     | 79.0                     |          | 4.62      |
| Novoto         | 42.9                     |          | 5.92      |
| Northern       | 77.5                     |          | 4.48      |
| Novanza        | 73.7                     |          | 5.12      |
| Lake           | 72.8                     |          | 5.57      |
| Wanga          | 84.6                     |          | 4.29      |
| Total          | 75.7                     |          | 2.04      |

Source: NIE, 2007
There are two reasons for the scarcity of textbooks. First, the budget allocation for learning materials is much too thin to cover the free distribution of textbooks to all pupils (as stated above). Second, the Government Press, which prints the books, is working much below its capacity due to worn-out equipment and poor management.

In Novania, writing, publication, and distribution of textbooks are undertaken entirely by Government. The writing of textbooks is the responsibility of the Textbook Committees of the National Institute for Curriculum Development (NICD), who entrust the task to selected staff under their supervision. Printing is done by the Government Press, while storage and distribution are handled by People's Bookstores, an agency created by the Government to supply schools. There are also private print shops in Novania, even some with modern equipment. But they charge high prices and take long time to deliver books because they have not much experience in the production of school books.

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.

Cost and management of textbooks

The NIE has recently approved a series of reading primers written under its supervision to fit with the present curricula. These primers are ready for printing, but they have not yet been trialled in schools.

Schoolbooks are relatively expensive in Novania. The average cost charged by the Government Press for primary education textbooks is $2.97 per copy. An experts' report argued that the cost of books could be slashed by 50% per cent if they were ordered in large batches through a competitive bidding procedure.

People's Bookstores runs a network of 400 bookstores-warehouses, staffed with people seconded from the Ministry of Education and retired school teachers. It is not really equipped to distribute books to all primary school children, and its staff does not have much experience in this field. To do so, it would also have to find new premises for 25 of its depots, requiring a total space of 3,700 m². 208 other warehouses with a total area of 22,000 m² would need to be revamped, at the average cost of $20 per m², in order to make the facilities moisture-proof and more secure. In the capital city, Novoto, People's Bookstores would need a central warehouse 1,050 m² in total area to replace its current building, a dilapidated structure offering little protection. People's Bookstores already owns a plot of land suitable for erecting such a building.

The Ministry of Education plans to improve the quality of education by raising significantly the availability of textbooks to primary school pupils. The objectives of the national textbook policy are to reach book-pupil ratios of 3:1 in grades 1-5 and of 2:1 in grades 6-8.

In order to attain these objectives, the Government introduced a reform of the textbook procurement and distribution systems. The following principles were adopted: (i) liberalization of textbook preparation and publication, (ii) principle of shared use of textbooks (more than one pupil can use a textbook), (iii) development of approved lists of textbooks and (iv) full decentralization of textbook procurement to school committees. The Government indicated that public funding dedicated to textbooks will be transferred directly to schools for the purchase of textbooks and instructional materials. The principle was also adopted that additional donor funds for textbooks would also be authorized to be directly transferred to schools.
School facilities

The adequacy and condition of physical facilities, infrastructure and other material resources has indeed proved to be crucial for pupil attendance and learning. While the number of sitting and writing places in Novanian primary school classrooms were, all in all, found to be sufficient, many pupils continue to face difficult learning environments as the survey findings summarized in Tables 4 and 5 below indicate.

Table 4. Selected indicators on school facilities and learning conditions, 2006

<table>
<thead>
<tr>
<th>Province</th>
<th>Percentage of major repairs needed</th>
<th>Classroom space per pupil (m²)</th>
<th>Number of students per toilet facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>St. D.</td>
<td>Mean</td>
</tr>
<tr>
<td>Coastal</td>
<td>34.6</td>
<td>11.09</td>
<td>2.1</td>
</tr>
<tr>
<td>Central</td>
<td>25.4</td>
<td>9.75</td>
<td>1.5</td>
</tr>
<tr>
<td>South-East</td>
<td>35.4</td>
<td>9.02</td>
<td>1.7</td>
</tr>
<tr>
<td>Novoto (C)</td>
<td>31.6</td>
<td>10.62</td>
<td>2.2</td>
</tr>
<tr>
<td>Northern</td>
<td>64.9</td>
<td>13.87</td>
<td>0.7</td>
</tr>
<tr>
<td>Novanza</td>
<td>80.5</td>
<td>8.64</td>
<td>1.0</td>
</tr>
<tr>
<td>Lake</td>
<td>45.5</td>
<td>10.66</td>
<td>1.0</td>
</tr>
<tr>
<td>Wanga</td>
<td>73.6</td>
<td>10.74</td>
<td>1.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>49.5</td>
<td>4.15</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Table 5. Availability of classroom furniture, 2006

<table>
<thead>
<tr>
<th></th>
<th>Sitting places as % needed</th>
<th>Writing places as % needed</th>
<th>Chalkboard as % needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean St. D.</td>
<td>Mean St. D.</td>
<td>Mean St. D.</td>
</tr>
<tr>
<td>Coastal</td>
<td>100.0 0.00</td>
<td>91.4 3.10</td>
<td>97.3 2.63</td>
</tr>
<tr>
<td>Central</td>
<td>99.2 0.48</td>
<td>79.1 5.85</td>
<td>90.5 5.61</td>
</tr>
<tr>
<td>South-East</td>
<td>98.7 0.50</td>
<td>82.5 3.69</td>
<td>99.6 1.46</td>
</tr>
<tr>
<td>Novoto</td>
<td>100 0.00</td>
<td>84.6 7.75</td>
<td>96.0 3.99</td>
</tr>
<tr>
<td>Northern</td>
<td>86.2 11.33</td>
<td>59.3 12.99</td>
<td>100 0.00</td>
</tr>
<tr>
<td>Novanza</td>
<td>100 0.00</td>
<td>89.5 2.72</td>
<td>100 0.00</td>
</tr>
<tr>
<td>Lake</td>
<td>99.7 0.52</td>
<td>90.9 1.99</td>
<td>89.7 8.1</td>
</tr>
<tr>
<td>Wanga</td>
<td>99.6 0.37</td>
<td>90.1 2.48</td>
<td>100 0.00</td>
</tr>
<tr>
<td>Total</td>
<td>99.4 0.20</td>
<td>86.6 1.45</td>
<td>95.7 2.07</td>
</tr>
</tbody>
</table>


It is worthwhile noting also that new schools and new classrooms are generally constructed as a result of community initiative. Consequently, poor communities usually face more severe shortage of classrooms and more difficulties in rehabilitating damaged infrastructure.

Furthermore, following the enrolment increase in 2006 and 2007 at primary level, there have been many reported cases of classroom shortage in schools, particularly in urban areas. The classroom distribution is quite uneven in relation to enrolment in the districts: the pupil-classroom ratio is as high as 66:1 in some districts in Coastal Province, and 71:1 in some municipalities.

3.1.2 Education achievement and learning outcomes

National tests are used in the Novanian Certificate of Primary Education to evaluate student achievement as related to curriculum objectives, but also for the purpose of certification and selection for progression to higher education levels. Moreover, the NOVANIA National Examination Board (NNEB) uses the raw scores of the examination tests to help teachers and schools to identify subjects and pupil groups characterized by low performances, and encourage them to improve teaching and learning results. The NNEB also shares the standardized scores with the schools and district offices so that they can compare their level and ranking in pupil performance from year-to-year.

The examination results for the school years 2006/2007 showed that the average total score (all subjects) was below 70 per cent. Interestingly enough the results attained in Novani were much
better than in Mathematics and English. Girls did better than boys in Novani and English, while boys performed much better in Mathematics and Science subjects.

The standard competency tests of the International Consortium for Achievement Monitoring (ICAM) showed that Novanian 6th Graders were among the top performers in the region in both Reading and Mathematics. Notwithstanding this rather encouraging result (in terms of the average national scores achieved), the Novanza, Wanga, Northern and the Lake Provinces scored significantly below the average. A considerable share of Grade 6 pupils in these provinces (8.6 per cent) were still at pre-reading and emergent reading (illiterate) levels. The Capital, had the highest ranking in reading; the majority of the pupils attained the levels of “analytical and critical reading”

The language of instruction may be a major factor behind these results; in spite of a firm policy requesting teachers to use the local languages as medium of instruction during the first years of schooling (Grades 1-3) it seems that this has not been respected everywhere.

As regards the results from the numeracy tests, the percentage of pupils who were mathematically skilled (highest level) were again to be found in the Capital and the South East Province while in the Northern, Novanza, Lake and Wanga Provinces nearly 60 per cent of the Grade 6 pupils had only attained basic numeracy or beginner’s numeric levels.

It was also clear from the ICAM study that pupils from large cities had higher achievement levels, in both Reading and Mathematics, than those in small towns and those in small towns performed better than those from rural areas. The important differences between urban and rural areas are probably linked to the use of the English language both in school and at home, availability of resources and facilities, and to parental support.

3.1.3 Learning outcomes in relation to educational inputs and processes

While research findings in many low- and middle-income countries have shown that factors relating to the teaching-learning processes are among the most important determinants of effective learning (e.g. time on task, students’ grouping, teacher attention given to individual students; teacher collaborative lessons, planning and peer support on pedagogy; pedagogical supervision and advice services) a recent report produced by the inspectorate of education points to the fact that teaching reality in Novania can be largely characterized as traditional “chalk and talk”, with low levels of teacher-student interaction and which are frequently child unfriendly and gender unresponsive.

3.2 Post-primary education

3.2.1 Inputs into the quality of secondary education

3.2.1.1 Curriculum

At secondary level, the curriculum has a total of 32 courses. The broad curriculum and the extensive selection of subjects demands considerable financial resources and some subjects (14 out of 32) are selected by less than 1 percent of the students. The total number of required learning periods per week is as many as 45 and there are many practical courses under the curriculum. However, there no components on emerging issues such as HIV/AIDS preventive
education or drug abuse prevention. The current curriculum is under evaluation by the Novanian National Examination Council and a curriculum reform is under way.

3.2.1.2 Teachers

Most of the secondary school teachers are trained graduate teachers. In 2006, there were 43,090 trained and 1,853 untrained teachers (total 44,943). Given the wide spread of subject matters, the overall pupil-teacher ratio in 2006 was rather favourable with 16.5 : 1 with relatively little variation across the regions. However, critical teacher shortages exist in the subjects such as English, Mathematics, Novanian language and the Sciences. Most of these shortages are concentrated in those regions which are also otherwise educationally disadvantaged. The current teacher attrition rate stands at 3.3 percent per year with the emergence of HIV/AIDS pandemic as one of the possible reasons.

At the secondary level, teachers are trained in two public diploma colleges for 3 years and faculties of education in four public and one private university that offer 3 year Bachelor of education programmes. The yearly output of these programmes is in the order of 700 per year. Secondary school teacher training suffers from an overburdened programme because it combines teaching methodology and subject mastery. Furthermore, teacher promotion has not been based on performance, but on qualifications and number of years of service, which contribute to internal inefficiencies.

In higher education, the average staff-to-student ratio is 14.6. However, according to a report made by the Public Universities Inspection Board, the recent introduction of a programme of self-supported student, which provides access to those students on a full cost and fee paying basis, has more recently skewed the staff-student ratio because the number of students has increased while the number of staff has remained constant. Tutorials have almost become a thing of the past. This is a most worrying trend because the students’ lack of close contact with lecturers is also compounded by the fact that many of the lecturers who teach in the public universities also offer their services to the private universities.

3.2.2. Education achievement

The Novanian Certificate of Secondary Education measures learning outcomes in relation to curriculum objectives, but it is also the entry requirement for study in higher education. It requires a student to take 8 subjects among which English, Maths, Physics, Biology and Chemistry. As can be seen from Table 6 examination achievement remains rather low with maths being the most problematic core subject where less than a fifth of all students succeeded their final secondary school examination.
Table 6. Secondary Leaving Examination performance in core subjects, 2002 to 2006

<table>
<thead>
<tr>
<th>Subject</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>34.9</td>
<td>31.8</td>
<td>31.4</td>
<td>34.8</td>
<td>34.6</td>
</tr>
<tr>
<td>Maths</td>
<td>16.2</td>
<td>17.3</td>
<td>12.1</td>
<td>16.0</td>
<td>18.5</td>
</tr>
<tr>
<td>Physics</td>
<td>26.4</td>
<td>29.5</td>
<td>29.9</td>
<td>31.1</td>
<td>24.5</td>
</tr>
<tr>
<td>Biology</td>
<td>30.8</td>
<td>30.0</td>
<td>31.0</td>
<td>31.9</td>
<td>32.0</td>
</tr>
<tr>
<td>Chemistry</td>
<td>26.6</td>
<td>25.7</td>
<td>28.6</td>
<td>29.7</td>
<td>26.4</td>
</tr>
</tbody>
</table>

Source: National Examinations Council Database

In the past, Novania did not participate in any international study measuring secondary student learning outcomes. For this reason, it is difficult to obtain an objective view on real learning outcomes and on how Novanian learning outcomes at secondary level compare internationally.

3.3 External effectiveness

3.3.1 Labour market and employment trends

The economy of NOVANIA has performed beneath its potential capacity during the last decade. Since the annual economic growth rate was lower than the population increase, the per capita income diminished and the creation of jobs for the labour force largely insufficient. The low performance of the economy has been intensified by the decreasing agricultural production and the significant migration from rural to urban areas. However, some significant growth of the economy was marked in sectors such as construction, manufacturing, tourism and wholesale and retail trade.

The 2004 Census showed that the openly-unemployed of the population currently stood at 17 per cent of the labour force of NOVANIA. Among the openly-unemployed, the age group 15-24 years accounted for 62 per cent. Various restructuring initiatives launched during the 1990s resulted in a decline in public sector employment.

The education system in Novania is viewed as a key sector in the economic and social development of the country. However, its contributions to the wealth of its citizens and promoting the nation’s social welfare have not met with expectations. There is a need to review the present curriculum at all levels of the education system

3.3.2 Type of employment and the qualification levels of the labour force

In the Census of 2004, 69 per cent of the labour force aged 15-64 was self-employed (mainly in rural areas). Agriculture absorbed the largest proportion, over 70 per cent, of the working population force. However, by 2015 the share of the labour force in agriculture is expected to be about 55 per cent. The new employment opportunities created in the modern sector during the
last few years, concern in particular, transport and communication. Creation of new job opportunities is expected mainly in trade manufacturing and tourism.

With the expansion of NOVANIA’s education system the formal level of education of the country’s labour force has gone up significantly. The majority of employed persons (69 per cent) have attained either primary or secondary education. Only 2 per cent of the working population attained university level education while 17 per cent had no formal education at all in 2006.

3.3.3 Imbalances between the supply and demand of graduates

It is noteworthy that the development in the education sector has not been matched with a similar expansion in employment opportunities. In the current debate on schooling in NOVANIA, fears have been expressed about the risk involved for overproduction of school leavers relative to available jobs. Many employers claim that primary school leavers lack the general and special skills required by the modern sector of the economy; it is argued that the present over emphasis on general education at both primary and secondary levels has lead to skills imbalances between the supply and demand of graduates in the labour market. The vast majority of primary school leavers continue joining the informal and the traditional agricultural sectors equipped with knowledge of little relevance to their way of life.

The introduction of certain practical subjects in the primary curriculum has failed in many places, especially when/where schools lack the equipments and specialized teachers needed for the teaching to become meaningful.

The transition between primary and secondary level education has been much lower than planned by the Government, and many boys and girls, aged between 14-17 years and eligible for secondary school, were not enrolled. Every year, many of those graduating from the primary school level join technical institutions.

The immersion of secondary education graduates in the modern sector of the labour market has slackened. The two main reasons for this are (i) their education is too general and does not include the skills required for jobs in the sector, and (ii) many branches are getting saturated.

The vocational training schools network has not been able to satisfy the needs of the labour market in terms of the quantity and quality required, structures of training trades and skill levels (i.e. in severe shortage of skilled technical workers and advanced technological workers). A lack of employment information services and low flexibility, as regards labour market practices, has certainly contributed to the current mismatch.

The courses of artisan and crafts offered by public Youth Polytechnics (under the Ministry of Labour) are attended mainly by primary and secondary school drop-outs. In addition private sector training institutions provide courses for almost half of the total annual intake of some 250,000 students who enter some form of TVET training.

The Government has recently decided that labour market skills survey and training needs assessments studies should be undertaken regularly by the Ministry of Labour in cooperation with the industry in order to design human resources plans and provide enabling inputs for curriculum development.

The objectives of the national technical and vocational training objectives have also been revised and strengthened. This implies (i) increased training opportunities for school leavers to enable them to become self-supporting; (ii) development of practical skills and attitudes that should lead
to income earning activities in the urban and rural areas; (iii) produce skilled artisans, craftsmen, technicians for both formal and informal sectors.

The Government will also introduce a system of accrediting private sector institutions involved in technical and vocational training. This is hoped to help the informal sector to get the technical capability required for modernizing the economy.

3.3.4 Education, poverty, well-being

As mentioned earlier, poverty progressively increased in NOVANIA during the 1990-2005 period, and several millions of people in NOVANIA still live below the poverty line today. The Northern Province and Wanga had the highest proportions of people living in poverty in 2005 (more than 60 per cent); the Central Province “only” 31 per cent. However, results of recent poverty mapping exercises in NOVANIA depict large differentials at the sub-district level. For instance, rural poverty rates within the Central Province (the least poor province) ranges from 10 per cent to 56 per cent across its 191 locations.

In NOVANIA, consistent research data and findings on the existing relationship between education and other social indicators over a period of time are not available. However, some 2004 Census data as well as special recent surveys on poverty, health and living conditions of the population have shed some light on their linkages with education and schooling. The NOVANIA Poverty Evaluation (NPE) study, 2004, concluded that children from poor homes are less likely to attend or stay in school; at the same time the probability of them suffering from malnutrition was much higher.

On the other hand lower school attendance was found to lead not only to lack of literacy and numeracy but also to poor basic knowledge of health and nutrition, which is essential in reducing infant mortality and other health indicators. Moreover, there is a negative relationship between the educational level of parents (among some other factors) and certain poverty and health indicators in NOVANIA. Thus, households that are large, headed by females with low educational attainment, are more likely to be poorer than others in NOVANIA, and child mortality tends to be much lower among mothers who attained the primary level of education than among those who had never attended school (other factors in disease prevention such as safe water supply, means of sanitary disposal also play an important role of course).

The education sector is among the most severely afflicted by AIDS. Children infected with HIV at birth never enrol in school. Many others have to drop out of school when they become orphans or stay at home to care for sick family members: In Novania, the number of orphans is estimated at 1.9 million; and several million children are now living with and caring for sick parents. The epidemic jeopardizes achievements in literacy, increase the number of poorly educated children, and multiply the number of working children. Moreover, many teachers are also affected by AIDS thus reducing the skilled human resources and depriving the education system of its most crucial elements. Since 2003, an HIV Prevention Programme, supported actively by the Ministry of Education and an external funding agency, has been conducted in several thousand upper primary schools (within existing infrastructures) in two provinces in NOVANIA and it is currently extended to the other provinces.

Promoting schooling and improving the living conditions in the arid and semi-arid areas in NOVANIA entails specific challenges. Pastoralists and nomadic communities, which form the majority in these areas, often distrust governmental institutions and do not want their services. This attitude is partly due to political and economic reasons and, not the least, cultural considerations. According to a recent research study on pastoral communities and schooling in
NOVANIA, parents tend to believe that when children are away from home for long time (for instance attending a boarding school), they risk forgetting their own culture and acquiring values and practices that are not appropriate in their own communities.

The Government of NOVANIA, however, has put in place various programmes aimed at improving health and education in the underprivileged areas, which are supported and implemented in cooperation with several non-governmental organizations (NGOs).
Group Activity:

Relating to the quality of education:

1. What are the main indicators used to analyse the quality of primary education in Novania? Which indicators do not appear in the figures and text of the sub-sector diagnosis but could have been used to provide a more comprehensive picture of the quality of primary education in the country?

2. In your view, are adequate data on student achievement in primary education available: (i) In Novania? (ii) in your own country?

3. (i) Are there any problems with the contents and availability of the textbooks in Novania?
   (ii) What are the opportunities and challenges concerning the distribution and availability of textbooks Novanian primary education?
   (ii) For each of the two aspects mentioned under a) and b), please compare briefly the situation in your own country.

4. According to you, what are the 3 most crucial problems revealed by the ESD of Novania regarding the quality of its (i) primary and (ii) post-primary education (by sub-sector)?

Relating to the external effectiveness of education:

5. (a) Which indicators are included in the extracts from the ESD of Novania regarding:
   (i) The match between education and employment.
   (ii) The relationship between poverty and education.

5. (b) Which additional relevant indicators would you suggest to include in order to address these two issues in an Education Sector Diagnosis (ESD)?

6. Judging from the described situation in Novania, which measures should be envisaged to improve the employability of
   (i) those leaving school at the end of the primary cycle.
   (ii) those graduating from secondary education.

7. Which geographical area(s) and/or population group(s) in Novania, should, in your opinion, be the priority targets for future programmes combining education and other poverty reduction measures? Briefly explain your choice.
Bibliographical References


www.efareport.unesco.org

UNIT 5. ANALYZING THE COST, FINANCING AND MANAGEMENT OF EDUCATION

By examining aspects of access, internal efficiency, equity, quality and external efficiency characterising an education system an ESD helps to address the crucial question: "Are the objectives of the education system being met?" Unit 5 invites you to adopt a different perspective by focussing on the ways and means to achieve these objectives. It deals in particular with questions which are of importance for political decision-makers, planners, and managers, such as: ‘Who pays for education?’, ‘How much resources are available for education?’, ‘Are they allocated according to the declared policy priorities and in an effective way?’, ‘Is the resource management and more generally the operational management of the education sector efficient, effective and equitable?’

Unit 5 is divided into two parts:

Part 1 introduces the main questions, indicators and analytical tools applied in ESD to study the ‘cost and financing’ and ‘management’ of education.

Part 2 is devoted to a practical exercise. It pursues the work on the case of NOVANIA started in Unit 2, 3 and 4; it invites you in particular to consider and draw lessons from the way in which the ‘cost and financing’ and ‘management’ of education are addressed in the presented example of an ESD.

Unit Objective:

The general aim of this unit is to provide you with the knowledge and skills required to assess an education system from the two major angles of analysis, namely its ‘cost and financing’ and its ‘management’.

Unit content:

- Analysis of Cost, Financing and Management Aspects in an ESD;
- Example of an Education Sector Diagnosis (the case of ‘Novania’).

Expected learning outcomes:

Upon completion of Unit 5 you should be able to:

- identify and analyse relevant indicators for the analysis of the costs and financing of education in an ESD as well as the requisite related data;
• identify and analyse relevant indicators and information for assessing the management of a country’s education sector;
• assess the possible contribution and limitations of selected tools for the analysis of education sector management;
• analyse and formulate opinions on the relevance and equity of the financing and resource allocation in a country’s education sector.

**Timeframe:**

• The study time required for this module is approximately 8 hours per week.

**Questions for individual reflection:**

• In this unit, you will be asked to answer two questions for individual reflection in connection with the content of Part 1.

**Group Activity:**

• After your careful individual reading of this unit you will be requested to work with your colleagues on a group activity related to Part 2. This activity will invite you to critically assess and learn from the way in which major aspects of cost, financing and management of education have been addressed in the ESD example of Novania presented here.

**Reading:**

For this unit you are asked to read:

PART 1. ANALYSING THE COSTS AND FINANCING AND THE MANAGEMENT OF EDUCATION

1.1 Analysis of the cost and financing of education

The purpose of analysing the costs and financing of education is to determine the extent to which the resources allotted to the sector enable the set goals to be reached, and whether the use of such financing is rational and equitable or whether - on the contrary - the resources could be better used, and possibly whether additional financing can be secured. To meet that purpose, education-sector diagnosis usually answers a number of questions on education expenditure and the financing of the sector. This section will present some fundamental questions and group them around three main lines: The first concerns the question: "Who is paying for education, how much, and for what?" The second involves two questions that seek to determine how to establish greater coherence between education financing and education policy; it concludes with some questions on the possibilities of improving future resource allocation to education.

The most commonly used indicators and the instruments and problems of data collection and analysis as they pertain to the central issues covered by an ESD will also be discussed.

1.1.1 Who is paying for education, how much, and for what?"

Related Questions

(a) How much does education cost?

In other words, what resources are being allocated to the system?

(b) Who is footing the bill?

- What are the respective contributions by government, local communities, parents, non-state organisations, business, and foreign aid?

(c) What are the funds used for?

- What is the spread of spending by type and level of education?
- What is the structure of spending by category: teachers, administrative personnel and other non-teaching staff, teaching materials, maintenance, and transfer payments (scholarships, meals, etc.), under ordinary expenditure, and, as regards capex, buildings and equipment?
Related Instruments and indicators

The most commonly used indicators to analyse these three issues are presented below:

Indicators relating to expenditure and resource allocation:

- public expenditure on education as a percentage of total public budget;
- recurrent expenditure on education as a percentage of total recurrent public expenditure;
- public expenditure on education as a percentage of GDP;
- public expenditure on education in absolute terms

Indicators relating to the sources of funding:

- the percentage contribution of the government, local/regional administration, and external aid to the financing of education;
- estimated parental expenditure on education, by level and type of education;
- total amount and percentage of the financial contribution of enterprises to the financing of education and training.

Indicators relating to resource allocation:

- public expenditure on education as a percentage of total public budget;
- recurrent expenditure on education as a percentage of total recurrent public expenditure;
- public expenditure on education as a percentage of GDP;
- expenditure, both in absolute figures and as a percentage, by level and type of education.

To address these issues, and calculate the indicators mentioned, first a precise statement of education expenditure must be drawn up in line with the above-mentioned categories. While accounting methods may be straightforward, there are many practical difficulties connected with data gathering:

- actual spending can be at odds with the approved budgets;
- finance ministries are sometimes reluctant to allow access to their databases;
- budget categories may not lend themselves to analysis; hence, it may be necessary to examine closely the end-of-period financial statements or break down staff-payroll data in order to obtain the distribution of expenditure by function;
- often, it is hard to get reliable information on education expenditure in very decentralised countries, in which provincial, district, and/or local government – and even schools themselves – may be responsible for a significant part of education funding;
- information on the contribution of households, NGOs, and business is seldom exhaustive, which can necessitate surveys to collect information that is otherwise unavailable.

Subsequently, the analysis will go beyond pure book-keeping. It will examine time series so as to unearth past trends, calculate indicators, and make international comparisons with a view to gauging fulfilment or non-fulfilment in the observed situation through each of the three questions raised above.
1.1.2 How can greater coherence be secured between education financing and education-sector policy?

Related questions

(a) Could the available resources be used more effectively?

- Is expenditure spread between the different levels/sub-sectors, or among the different inputs needed by the system, in a way that maximises the attainment of education-policy objectives?
- Is the cost of education at the different levels within reason, or could it be reduced? What negative fallout would such cost-cutting have?

(b) Is it possible – and desirable – to increase the resources channelled into the system?

- If financing is insufficient to reach the anticipated outcomes, would it be possible to increase the input of any contributor, and what might be the possible negative consequences? For instance, asking parents to pay more might cause a drop in the demand for education; or education might be competing with health in some local communities: should one sector benefit to the detriment of the other?
- Which measures could help muster additional contributions from parents, business, local communities, the government, and foreign donors?
- If necessary, within which levels and programmes could private education be expanded to shift the financing burden? Which positive and negative effects might such a development bring about, and would it be possible to offset them?

Related additional instruments and indicators

Here are some ESD indicators commonly used to better gauge the real cost of education, its future financing possibilities, and education-resource utilisation:

Indicators relating to cost and resource allocation

- unit cost by level and type of education;
- breakdown of education budget by type of expenditure (staff, materials and equipment, maintenance, etc.);
- total real expenditure on education, by level and type;
- trends in household income and household spending on education.

Indicators relating to resource utilisation:

- actual execution of public education budget;
- efficiency of cost and expenditure control;
- teacher utilisation in terms of actual workload, classroom contact hours, etc.

It must be said that the practical difficulties to obtain comprehensive and reliable data relating to these indicators are numerous:
ministries of finance, national statistics offices, and other institutions are often reluctant to provide access to certain databases;
- budget categories are not necessarily suited to functional analysis;
- adopted budgets may differ from actual expenditure;
- a detailed analysis of expenditure statements is necessary to break down the expenditure in an adequate way;
- often, there is not enough information – let alone time series – about the contributions of households, local communities or enterprises, and so on.

1.1.3. How can future resource allocation be improved?

Two further questions are worth mentioning. They are essential to sector diagnosis and the development of future resource-allocation strategies for education, but are not the direct focus of an analysis of the costs and financing of education:

(a) Given the policy applied, where should any additional resources be allocated first?

Where should investment be made to maximise the effect of the system on the major education-policy goals? Access, Achievement, Equity, Quality, External Efficiency etc?

This is the central question for decision-makers: it can only be answered on the basis of a synthesis of the main results of the sector analysis and the following discussion and simulation of strategic options for the future of education in the country considered. Any envisaged improvements will be compared to possible alternatives, and their feasibility measured taking into account the constraints weighing on the system.

(b) Who determines resource allocations and on which basis?

How is the education budget prepared and audited? How much coherence is there between these decisions and the education-sector policy?

To which extend could the decentralisation of certain financial responsibilities help optimise the utilisation of the resources allotted to education?

Do – or should – the funders of education have any control over how funds are used?

A crucial issue here is whether fund allocation and control mechanisms are a help or -- conversely -- a hindrance, to the education-sector policy translating into implementation. This is more an organisational than a financial issue. It should be raised in each sector analysis, however, and involves the use of investigation instruments such as public expenditure tracking surveys (PETs) or more or less comprehensive management audits.

1.1.4 Analysing cost and financing from a social actor’s perspective

Partners such as parents’ associations, teachers, and students can also be interested in the three central questions of ‘cost and financing’ analysis namely:

- Are the expenditures in line with the declared policy objectives?
- Who pays how much for education?
- Are the resources utilised in an optimal way?
However, in line with their own specific interests and objectives, these players tend to focus their analysis on particular issues. For instance, teachers are probably especially interested in assessing how additional resources for teaching/learning aids might be secured. They are inclined to consider an increase in teacher salaries as an asset (contributing to increased productivity) rather than a problem – as it is usually presented in current ESDs.

Questions for individual reflection:

To what extent are the declared national education policy objectives for your country well reflected in:

- The allocation of the current public education budget to the different sub-sectors (pre-primary, primary, general secondary, vocational etc), and
- The distribution of the primary education budget between salary and non-salary expenditures?
1.2 System and Resource Management Analysis

1.2.1 Analysis of System Operation

Management of the education sector as a system first requires education-ministry officers to think out well-reasoned arrangements that will translated into approved policies which, in turn translated into concrete outcomes. Such a management system would have sufficient control machinery (laws and regulations, budgets, and so on), a distribution of responsibilities and resources, plus institutional capacities (in terms of structures, personnel, tools, etc.) to sustain the effort. This management system must include an effective information system. Indeed, to plan, monitor, and advise, central education services constantly require and analyse information from all points in the system and continually track developments using appropriate indicators, etc.

In some circumstances, critical questions about the effectiveness of the education management system can crop up. In particular, this occurs when:

- Part of the budgets and programmes adopted are not implemented;
- There are problems of ‘apparent overstaffing’ or poor resource utilisation (for instance, of teachers);
- Events suggest that classroom teaching is not provided regularly (teacher absenteeism; complaints from parents, teachers, pupils, etc.) education is delivered in very poor conditions (infrastructure shortfalls, lack of basic materials, teachers lacking minimum skills and commitment, etc.); and
- Data and information are not readily available to the people who are supposed to prepare policy decisions, plan, and manage. These tell-tale signs of dysfunction, attributed to the entire education ministry, or to some of its departments, levels or education-management sectors, can prompt national authorities or external funding agencies to begin a critical assessment, followed by changes to the entities and/or management processes involved. An audit of operations and outcomes of the ministry or some of its management functions may be deemed necessary. However, in many cases, ministries are in no position to undertake a management audit without external assistance as they lack time and suitably trained staff, and particularly as ministry officials are not objective about the management practices in which they themselves are involved.

An ESD can give the national authorities the opportunity to make precisely this type of analysis, with the input of experts from outside the ministry of education. Management audits covering the entire education management system usually focus on four essential functions or levels. Below, we shall present these functions and, for each, those questions generally taken as essential for the assessment of management capabilities.
Related Questions

Management audits carried out in the education sector are aimed to assess how well the latter fulfils its main functions by investigating a certain number of related crucial questions:

Concerning the **strategic function**:

- How are education policies and plans prepared? What are the degree and type of involvement by education-system partners in the process?
- Are policies based on the evaluation of former policies and programmes?
- How much coordination is there between budget preparation and policies?
- Are the structures, resources, and tools to perform this function appropriate?

Concerning the **management function**:

- Are the resources, especially human resources (teachers, etc.), distributed and used both effectively and efficiently?
- Are there any mechanisms able to detect and correct any deviations of the system from initial objectives (management control and correction mechanisms)?
- To what extent is the staff concerned (teachers, administrators, etc.), satisfied with the management system in place?

Concerning the **information function**:

- Does education management have an information system? How appropriate and functional is it?
- How is the collection of relevant information on management designed and organised? Is information stored, analysed, and re-circulated correctly and effectively?
- Is information readily accessible to managers at different levels? If so, is the information really used?

Concerning the **operational function**:

- Which strengths and defects are there in the operation of education and training establishments?
- What difficulties do teachers experience in class management?
- Is the supervision of class and school management effective?
- Which are the strengths and weaknesses of the professional and administrative support given to teachers and school heads?
**Indicators or Assessment Criteria**

Some commonly applied criteria in an audit/organisational analysis to assess the strengths and weaknesses of the management system are given below:

**Concerning the strategic function:**

- Is there coherence between policy objectives and educational programmes on one hand and budget allocations and the organisation of management functions and tasks on the other? Is there a match between the assignment of tasks and the human, financial, and physical resources allotted?
- Is there coherence between the regulatory framework and the organisational structures and procedures put in place (distribution of responsibilities and duties, control procedures, etc.) as to ensure effective performance of the different management functions?

**Concerning the management function:**

- What is the effectiveness of accountability mechanisms embedded in the different structures and institutions of educational management?
- Is the coherence between resource allocation and the degree of utilisation (particularly human resources, on which financial investments and outcomes of the education system largely depend), in accordance with determined needs and defined standards?
- What is the actual institutional capacity (resources, decision-making power, etc.) at the different levels (school, district, province) and/or in different management departments (human-resources division, for instance)?
- What is the cost/effectiveness ratio of existing administrative procedures?

**Concerning information functions:**

- What is the availability of reliable, basic data for essential management and monitoring functions?
- How effective is information gathering, processing, and analysis for management purposes?
- What is the access to management data by the players involved (teachers, school heads, administrators at decentralised levels, etc.).

**Concerning the operational function:**

- Extent of commitment to their task by the various key players – teachers, school heads, teacher trainers, inspectors, administrators
- Compatibility between the training and selection criteria of managerial staff (school heads, inspectors, etc.) with the profile of the positions they hold
- Coverage and regularity of in-service training for teachers and school heads.
Availability of Data and Collection Instruments

To study the strengths and weaknesses of a management system by means of an audit/organisational analysis, the following instruments must be used:

- Analysis of administrative documents;
- Interviews with the different players involved;
- Analyses of statistics on the resources allotted to administrative processes and the outcomes or impacts of such processes. Management audits require considerable work and resources. Usually, much of the essential information and data exists already.

However, the people involved in management are often reluctant to participate in such an evaluation as they are sometimes unwilling to see their duties and behaviour scrutinised. Nevertheless, for the findings of a management audit to be accepted and translated into real changes, it is important to secure a modicum of participation and backing from those involved. An audit's chances of instigating genuine improvements increases significantly when the main administrative levels and services affected actually participate, from the design stage through to the various phases of the review.

1.2.2 Analysis of Human-Resources Management

In line with the specific challenges and constraints of the education system under review, the analysis of management aspects in an ESD can also concentrate on a specific concern. One major management concern – that has become an important focus of analyses in ESDs in recent years – lies in the better utilisation of human resources. This has become a crucial challenge in many developing countries, where the prospects of substantially increasing official spending on education are limited, and where also, particularly the teacher requirement continues to rise, given the expansion of enrolments still needed to provide education for all.

Hence, in the part devoted to educational management, more and more ESDs include analyses (statistical and other types) of the management of teaching-staff allocation and utilisation.

Questions

One crucial question to analyse in order to evaluate the ‘rationale’ of teaching staff management is the coherence of teacher postings among schools (similar analyses can be applied to buildings, facilities, and equipment). This question can be put in different ways:

Are teachers assigned to schools on a logical basis depending on the size of enrolments? Do schools with the same enrolment numbers have the same number of teachers? Do schools with similar numbers of teachers have roughly the same enrolment numbers?

Another central question concerns the actual use of the teachers assigned. In effect, in several countries, many teachers do not teach, but occupy administrative posts. Therefore, the question arises whether the best possible use of human resources is really being made. More importantly, it is often observed that a considerable proportion of classroom teachers actually do not teach the mandatory workload. In such circumstances, there is overstaffing and those ‘idle’ teachers could be redeployed to fill vacancies.

Within the same country, the proportion of ‘under-utilised’ or poorly-utilised staff might vary from one region to another, and within regions between urban areas and rural areas, and even
between different schools. Hence, in a diagnosis aimed at investigating the rational management of human resources, it is advisable to study the actual use made of teaching staff and the various phenomena that may explain inefficient utilisation of these resources.

**Indicators and Instruments of Analysis**

In some recent work, a composite indicator was built and applied to evaluate the *degree of inconsistency or ‘incoherence’* in teaching-staff allocation. The box below explains how to calculate and use the indicator.

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**Evaluating the consistency/coherence of Teacher Allocation to Schools**

According to the method applied by A. Mingat et al., the evaluation of the degree of consistency in teacher postings presupposes (i.) that there is an official standard (pupil-to-teacher ratio) or a theoretical benchmark of what an appropriate allocation would be; (ii.) then, the discrepancy between the observed situation and the standard/benchmark must be measured.

A benchmark other than the pupil-to-teacher ratio (which is usually too rigid to be applied unvaryingly across the entire country) can be obtained by calculating the central or median trend of teacher distribution depending on enrolment numbers. To do that, all the schools of the country are placed in a graph where, for each school, the pupil enrolment is recorded on the X-axis and the number of teachers on the Y-axis.

Obviously, to combine this overall matching between staff numbers (TS) on the one hand, and enrolment numbers (EN1) on the other, it is convenient to estimate the linear statistical relationship that links the two magnitudes.

It is generally observed that many schools are located on each side of this central trend. Hence, it is worthwhile to measure the variability in the number of teachers between schools or in the size of staff for schools that have a given enrolment (for example 150, 300 or 500 pupils) or the size of the variability in pupil enrolments between schools with comparable teaching staff numbers. In the statistical estimate, R² is an indicator of the general extent of these spurious dispersions. Its value is located on a continuum going from 0 (characteristic of total randomness in the postings) to 1 (indicating, on the contrary, the application of a totally logical formula in the allocation of staff and resources to schools). This indicator can then be used to measure the degree of incoherence in resource allocations.

The further R²' (coherence indicator) is from the ideal (that is, 1), the more random – and even irrational - are the allocations. By way of an example, when R² reaches 0.5 in country X, 50% of teacher postings to schools are ‘random’, or even ‘incoherent’ by comparison with the central trend (that is, the standard) for teacher postings in that country.

---

Analyses of this type can be fine-tuned to factor in possible posting disparities between different provinces/regions of a country or between rural and urban areas. Thus, for schools of a given size (say, 200 pupils), it is possible to calculate the average teacher complement separately for urban areas and rural areas in order to measure parity/disparity between these different types of zones; and the same can be done for the purpose of inter-regional comparisons.
To assess the utilisation of the contingents of teachers posted to schools, usually the average rate of teacher utilisation is taken; it links classroom teachers’ actual average teaching load and their required, official teaching load for a given cycle.

As is the case for the pupil-to-teacher ratio, teaching-load standards are generally set at a national level. National standards vary significantly from one country to another. They are the results of negotiations with teacher unions and generally factor in available resources and other context-related elements. The standards indicate the average number of classroom contact hours a teacher is supposed to teach and in some cases upper and lower limits as well.

Logically, primary-school teachers all have the same teaching load given that as a general rule, each teacher takes one class – except in double-shift situations, where one teacher takes two classes. The situation is more complex in secondary education, as teaching loads may depend on qualifications, subjects taught, etc.

To get a good idea of the real possibilities of optimising teaching-staff utilisation, it is worthwhile to sharpen the analysis and probe deeper to ascertain how many contact hours are actually being taught. Thus, utilisation rates can be compared by region and type of zone (urban and rural) in order to ‘pin-point’ possible overstaffing and shortfalls for corrective measures to be taken. Teacher utilisation can also be compared between schools of different sizes and/or structures (complete/incomplete cycle; number of curriculum offerings/special courses; etc.) to measure the degree to which there is a linkage between staff-utilisation rates and school characteristics.

By re-arranging school size, structure, and location (re-working the school map) teacher utilisation can be made more rational. Secondary-school teachers could be trained to teach more subjects, thereby fostering greater use of staff.

Data Availability and Collection

Usually, to calculate the above indicators on teacher postings, baseline data gathered from the annual schools census are used and also serve to produce statistical yearbooks.

It is harder to get reliable data on the actual use of teachers, and especially on the contact hours they actually teach. Even if such information is available in schools, known to inspectors, or accessible in the sub-regional administration, it is not systematically fed into the regional and/or national levels. As a matter of fact, school heads often fear that any apparent ‘under-utilisation’ of their teachers will result in lower teaching-staff strength the following school year, leaving them less leverage in their staff management.

If rational human-resource management in the education sector appears to be causing particular problems in a country, then, a thorough examination of teacher postings and/or actual utilisation must be performed as part of an ESD, for instance. Usually this involves the collection and/or verification and analysis of the relevant data.

1.2.3 Management Analysis from the Perspective of a Particular Social Actor

Some players tend to challenge the objectives of the education policy whereas ‘traditional’ audits (using a ‘systemic’ approach) consider them as sacrosanct. For example, within an ESD, it is not uncommon for a management audit to scrutinise the true effectiveness of the decentralisation of some education-management functions while leaving the very rationale of the decentralisation adopted by the government unchallenged. In some contexts, however, teacher unions are against
decentralisation and therefore would not take the objective of decentralisation as ‘granted’ in any education-administration audit.

From their standpoint – and that of other players such as parent and student associations – a priority management target would be the introduction of more participatory management. Hence, an ESD undertaken from this angle should thoroughly examine the strengths and weaknesses of the existing management system (current procedures, ability of the players to involve others, etc.) in order to reorganise and thus making this goal attainable.

Questions for individual reflection:

1. To what extent and in which respects are there weaknesses in the management of teachers in your country?

2. And which difficulties (if any) could you encounter when trying to gather the data needed to assess the primary teacher allocation, i.e. to calculate the degree of coherence of primary teacher allocation?
PART 2. DIAGNOSIS OF THE EDUCATION SECTOR IN NOVANIA – COST, FINANCING AND MANAGEMENT OF EDUCATION

2.1 Cost and financing of education in Novania

2.1.1 Trends in Novania’s government budget and external aid

The weak economic growth recorded in Novania since the late 1990’s has been accompanied by deterioration in the State’s fiscal position and a growing domestic debt. Government revenue fell from 29 percent of GDP in 1999/2000 to 22 percent in 2002/03. Although the tax revenue declined, public expenditure continued to come under expansionary pressure on account of increased spending on wages, salaries and interests for loans. In most sectors, donor budgetary support has been falling concurrently.

Since 2004, however, a variety of donor agencies have once again strengthened their co-operation with the authorities of Novania and increased their support for social sector programmes. The primary education sector has received priority donor support, especially in the form of contributions to capital outlays (for school construction etc.) and support to textbook provision and teacher in-service training programmes. Decreasing external aid was given to the tertiary education sector, thus placing the main burden for the future development of this sector on the Government and the households.

However, there are good prospects for the overall external aid to education in Novania being stepped up significantly over the coming years. Development partners have recently made firm indications to provide grants and loans totalling some 30 per cent of the total education budget.

The Government is concerned with maintaining the country’s external debt under strict control and to ensure Novania does not become a Highly Indebted Poor Country (HIPC) or Severely Indebted Low income Country (SILIC). It wants to better articulate foreign aid with the national budget, the national development priorities and maximize the grant element of external aid (minimizing the debt servicing costs).

It seems that more external resources will indeed be required to address Novania’s development problems. The country’s real GDP growth between 2004 and 2009 is projected to grow but remain relatively low, below 2.8 percent.

The Government has recognized the strategic importance of raising the overall education level of Novanians within the context of poverty reduction and economic growth. Education is not only a welfare indicator per se, it is also a key determinant of earnings and, therefore, an important exit route from poverty. As a result, human capital investment, including health and education, is identified as one of the four pillars of the Government’s overall economic development strategy.

For the education sector, a medium-term strategy and programme was adopted in 2005. The Ministry of Education considered that the most effective mechanism to coordinate external aid for the sector and successfully implement such a programme is through a Sector Wide Approach (SWAp). The Ministry has since been working with a wide range of stakeholders in the education sector to develop a SWAp for the development of the education sector in Novania for the period 2006–2010.
2.1.2 Public Expenditure Management

At over 26 percent of the GDP, the public expenditure levels in Novania have been significantly above that of other low income countries. Furthermore, a Public Expenditure Review in 1999 concluded that expenditure management trends were not consistent with the objectives of achieving sustained growth and poverty reduction. In response to this, the Government took several steps to improve the public expenditure management, in particular the adoption of the Medium Term Expenditure Framework (MTEF) approach to budget formulation and rationalisation of the central administration.

The MTEF objective is to strengthen the linkage between the annual budget and national development policies and provide means of aligning expenditures to national priorities, outputs and outcomes set in the National Development Strategy.

2.1.3 Public education expenditure, unit costs and resource utilisation

The average Government spending on education and training, excluding the share by households has ranged between 5 and 7 percent of the GDP since the 1990’s in Novania. Public expenditure on social services including education as a proportion of the total government budget has ranged between 24.8 percent to 34.8 percent between 1993 and 2002. Significant and consistent budgetary allocation towards education has existed since Independence. It translates to over 6.8 percent of the GDP over recent years.

At the national level, recurrent Government spending on education, (mainly teacher salaries and compensations) has been higher than any other social sector spending. Table 1 provides an overview of recent trends in recurrent expenditure on education, by level. Significant investment has been made particularly towards the provision of basic education with 50 percent of the resources going to primary education in 2004.

Mobilization of adequate resources for the expansion of secondary school education is a major condition of the envisaged increase in transition from primary level. The Government of Novania will continue to finance teachers’ salaries at this level and provide targeted support to vulnerable groups such as supplying laboratory equipment and building new schools in marginal areas but parents are expected to provide all other support (textbooks, tuition, school uniforms).

Regarding the post-secondary level, the Government intends to target mobilization of more financial resources from the private sector, industries, grants, and fee payments by students. The private sector and the students will therefore be required to contribute more towards the financing of quality, tertiary and university education and training.

University education and training is currently quite expensive indeed and requires huge investments by all partners. In 2004, the average spending per student at the university level was 30%, 7%, and twice as expensive in relation to primary, secondary and technical-vocational education, respectively. The ratios of spending on university to primary and secondary education are particularly high.

At a constant (1982) price, primary and secondary unit costs increased 27 percent at the end of the 1990’s (1998-2000). In 2003/4, the unit cost at the primary level was about US$60, and US$200 at the secondary level. Given that there is US$240 of the current per capita GDP in Novania, the unit costs are quite high on both levels.
Table 1. Government recurrent expenditure on education by level, (2000/01 -2003/4) in “Novashis”.

<table>
<thead>
<tr>
<th>Subsector</th>
<th>2000/01 approved</th>
<th>2001/02 estimates</th>
<th>2002/03 Approved</th>
<th>2003/04 Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Administration and Planning</td>
<td>1,482.57</td>
<td>1,471.26</td>
<td>2,071.94</td>
<td>3,479.60</td>
</tr>
<tr>
<td>Early childhood Education</td>
<td>5.94</td>
<td>5.94</td>
<td>7.15</td>
<td>7.43</td>
</tr>
<tr>
<td>Primary Education</td>
<td>26,245.46</td>
<td>26,443.45</td>
<td>34,611.41</td>
<td>40,788.38</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>13,433.84</td>
<td>13,566.87</td>
<td>16,355.47</td>
<td>18,371.93</td>
</tr>
<tr>
<td>Teacher Education</td>
<td>129.63</td>
<td>138.90</td>
<td>155.91</td>
<td>215.94</td>
</tr>
<tr>
<td>Special Education</td>
<td>103.19</td>
<td>103.78</td>
<td>121.39</td>
<td>187.39</td>
</tr>
<tr>
<td>Technical Education</td>
<td>750.92</td>
<td>716.77</td>
<td>889.55</td>
<td>1,108.32</td>
</tr>
<tr>
<td>University Education</td>
<td>5,849.69</td>
<td>5,907.11</td>
<td>6,795.74</td>
<td>7,470.07</td>
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<tr>
<td>Miscellaneous Services</td>
<td>264.92</td>
<td>229.67</td>
<td>261.13</td>
<td>251.11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48,266,168.982</strong></td>
<td><strong>48,583,741.620</strong></td>
<td><strong>61,269,683.015</strong></td>
<td><strong>71,880,179.400</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsector</th>
<th>2000/01</th>
<th>2002/03</th>
<th>2003/4</th>
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<tr>
<td>General Administration and Planning</td>
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<td>2,071.94</td>
<td>3,479.60</td>
</tr>
<tr>
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<tr>
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<tr>
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<td>5,849.69</td>
<td>6,795.74</td>
<td>7,470.07</td>
</tr>
</tbody>
</table>
2.1.4 Teacher remuneration

At the primary level, 95 percent of the total budget goes to teacher salaries and allowances over the last 4 years, leaving 5 percent for operation and maintenance, including spending on programs such as bursaries, school feeding, etc. At the secondary level, 96 percent of the budget goes to personnel emolument, leaving less than 4 percent for operation and maintenance, including programs such as scholarships. (see: Table 2)

A teacher’s total salary also depends on the average salary level of teachers. A commonly used comparison is the per capital GDP. In 2003/4, the annual average salary of Novanian primary school teacher is about 3.5 times of the GDP per capita, and that of a secondary school teacher is about 5.5 times of the GDP per capita. This falls within the regular range of other comparable Sub-Sahara African countries. However, it should be noted that salaries only constitute 60 percent of the total compensation package to the teachers at both levels. Teacher’s benefits include housing, medical, pension, other personal allowances. Taking this into consideration, the average compensation for a primary and a secondary school teacher would be around 6 and 9 times of the GDP per capita respectively.

However, it is also useful to compare teacher salaries with those of similar professions or jobs, especially in the public sector. In Novania, the average teacher salary is quite comparable with those working at both local and central government levels. Compared with other public sector workers, the average salary in the education sector in 2004 is higher than agriculture and forestry; mining and quarrying; construction; manufacturing; and community, social and personal services (excluding education), but lower than finance, insurance, real estate, business services; electricity and water; transport and communications.
Table 2. Government recurrent expenditure on teacher salaries and allowances (1996-2003)

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<thead>
<tr>
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<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total amount of recurrent expenditure</td>
<td>16,719.00</td>
<td>24,742.33</td>
<td>24,816.82</td>
<td>27,011.27</td>
<td>27,958.74</td>
<td>38,280.98</td>
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<td>salary</td>
<td>16,650.24</td>
<td>24,662.95</td>
<td>24,456.59</td>
<td>26,297.27</td>
<td>27,142.38</td>
<td>31,017.53</td>
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<tr>
<td>non-salary</td>
<td>68.76</td>
<td>279.40</td>
<td>360.23</td>
<td>483.40</td>
<td>816.16</td>
<td>7,263.43</td>
</tr>
<tr>
<td>Teachers allowance and pay</td>
<td>0.96</td>
<td>0.99</td>
<td>0.99</td>
<td>0.90</td>
<td>0.97</td>
<td>0.81</td>
</tr>
<tr>
<td>% of non salary cost</td>
<td>0.04</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.19</td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Enrollment ('000)</td>
<td>5,598.00</td>
<td>5,764.90</td>
<td>5,919.70</td>
<td>5,867.70</td>
<td>5,882.60</td>
<td>6,917.55</td>
</tr>
<tr>
<td>Unit cost- current price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>salary</td>
<td>2,867.14</td>
<td>4,243.43</td>
<td>4,131.39</td>
<td>4,521.00</td>
<td>4,614.04</td>
<td>4,833.89</td>
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<tr>
<td>non-salary</td>
<td>119.46</td>
<td>48.47</td>
<td>60.85</td>
<td>82.34</td>
<td>138.74</td>
<td>1,850.00</td>
</tr>
<tr>
<td>1982=100</td>
<td>508.33</td>
<td>575.00</td>
<td>613.00</td>
<td>635.00</td>
<td>674.00</td>
<td>674.00</td>
</tr>
<tr>
<td>1987 price total unit cost</td>
<td>597.53</td>
<td>746.42</td>
<td>682.89</td>
<td>724.94</td>
<td>706.16</td>
<td>698.44</td>
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<tr>
<td>growth rate (real)</td>
<td>(0.04)</td>
<td>0.27</td>
<td>(0.08)</td>
<td>0.06</td>
<td>(0.03)</td>
<td></td>
</tr>
</tbody>
</table>

Secondary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount of recurrent expenditure</td>
<td>6,766.00</td>
<td>10,170.24</td>
<td>11,870.76</td>
<td>12,294.82</td>
<td>12,629.48</td>
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<tr>
<td>salary</td>
<td>6,224.72</td>
<td>9,481.04</td>
<td>11,562.06</td>
<td>11,699.02</td>
<td>11,937.54</td>
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<tr>
<td>non-salary</td>
<td>541.28</td>
<td>319.20</td>
<td>308.68</td>
<td>295.80</td>
<td>691.94</td>
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</tr>
<tr>
<td>Teachers allowance and pay</td>
<td>0.92</td>
<td>0.97</td>
<td>0.97</td>
<td>0.95</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>% of non salary cost</td>
<td>0.08</td>
<td>0.03</td>
<td>0.03</td>
<td>0.05</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Enrollment ('000)</td>
<td>658.30</td>
<td>687.50</td>
<td>700.5</td>
<td>661.8</td>
<td>660.90</td>
<td></td>
</tr>
<tr>
<td>Unit cost- current price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>salary</td>
<td>10,277.99</td>
<td>14,793.07</td>
<td>16,946.13</td>
<td>18,577.85</td>
<td>19,109.32</td>
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</tr>
<tr>
<td>non-salary</td>
<td>9,455.75</td>
<td>14,328.78</td>
<td>16,585.47</td>
<td>17,677.37</td>
<td>18,062.56</td>
<td></td>
</tr>
<tr>
<td>1982=100</td>
<td>508.33</td>
<td>575.00</td>
<td>613.00</td>
<td>635.00</td>
<td>674.00</td>
<td></td>
</tr>
<tr>
<td>1982 price total unit cost</td>
<td>2,021.91</td>
<td>2,572.71</td>
<td>2,704.46</td>
<td>2,726.83</td>
<td>2,835.24</td>
<td></td>
</tr>
<tr>
<td>growth rate (real)</td>
<td>(0.02)</td>
<td>0.27</td>
<td>0.07</td>
<td>0.06</td>
<td>(0.03)</td>
<td></td>
</tr>
</tbody>
</table>

Since expenditures on teachers represent the lion’s share of public spending, it is useful to consider the distribution of teachers in relation to enrolments. This provides some insight into the resource utilisation. In 2005, the average pupil teacher ratio (PTR) at the primary level was 33/1. The staffing in the primary schools however does not use PTR as a direct benchmark. Teacher requirements are determined by the number of classes times 1.035. By using this formula, it was meant to guarantee a sufficient number of teachers in sparsely-populated areas where class and school sizes tend to be small. But, unnecessary low PTRs are not only observed in remote small schools but also in Novanian schools in highly populated areas with normal school sizes because teachers are not deployed in a rational way. More generally, it is worthwhile to explore the possibilities of using the resources available for education in a more efficient way, e.g. in addressing problems such as late schooling (high proportion of over-aged children in the system), drop-outs and repeaters.

2.1.5 Who pays for education?

In Novania, central and local governments, the private sector (including NGOs), households, communities and other stakeholders contribute to the financing of education. The private provision of education, which currently covers only a small proportion, has also contributed to the sector. In addition, as mentioned above, many international development partners also provide support to the education sector in Novania.

Households spend a significant amount of their resources on education for their children (see Table 2). Household expenditures include tuition, school uniforms, textbooks, transportation,
meals and boarding. On average, primary and secondary education expenditure constitutes 15 percent of household non-food consumption expenditures. Comparing household and public spending on education, the household proportion of total spending is over one-fifth of the total spending at the primary level, and at 41 percent, is much higher at the secondary level.

Table 3. Household spending on primary and secondary education per child, in Novashis (2003)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Level</strong></td>
<td></td>
</tr>
<tr>
<td>School fee</td>
<td>589</td>
</tr>
<tr>
<td>Uniform</td>
<td>217</td>
</tr>
<tr>
<td>Textbooks</td>
<td>253</td>
</tr>
<tr>
<td>Transportation</td>
<td>28</td>
</tr>
<tr>
<td><strong>Secondary Level</strong></td>
<td></td>
</tr>
<tr>
<td>School fee</td>
<td>7,357</td>
</tr>
<tr>
<td>Uniform</td>
<td>703</td>
</tr>
<tr>
<td>Textbooks</td>
<td>503</td>
</tr>
<tr>
<td>Transportation</td>
<td>265</td>
</tr>
<tr>
<td>Boarding</td>
<td>825</td>
</tr>
</tbody>
</table>

According to the Welfare Monitoring Survey, the household contribution to primary and secondary education increased by 33 and 51.4 percent respectively between 1995 and 2003. The figure below shows the respective share of household spending on education by income group.
2.1.6 Towards a policy of Free Primary Education and how to afford it

Education, and particularly primary education, is the top priority on the Government agenda. The government’s intention is therefore to institute free primary education. It is also aiming to ensure more equitable enrolment by targeting disadvantaged rural and urban areas, and vulnerable groups, such as female and street children.

The implementation of free primary education will necessitate increases in both recurrent and development expenditures. However, making public resource utilization more efficient is also a priority without which the attainment of universal primary education seems unlikely.

The government plans to finance most of the core costs of free primary education from its own resources. However, the experience of countries that have already moved in this direction shows, that the implementation of Free Primary Education is often fraught with difficulty. There are other issues, which need to be addressed including child labour. According to the 2001 child labour survey carried out in Novania, about 32.1 percent of the parents released their children from school in order to help the family business whilst 29.5 percent indicated that earnings from their children’s work augmented the household income. Only a 0.3 percent of the parents reported that they released their children from school because they thought their education or training environment was not suitable.
2.2 Overall management of the education sector

2.2.1 Organisation and reform trends

In Novania, formal education and training is managed and administered by various government agencies. The Ministry of Education (MoE) is the main player. It is supported by a number of specialised agencies (Teaching Service Commission, Novania Staff Development Institute etc). Other government ministries (including Home Affairs, Agriculture, Industry and Labour) also provide some education and training programmes, although they constitute a very small proportion of overall education and training provision in Novania. Up until the late 1970’s, primary and secondary education in Novania was completely a local responsibility. However, since then, education responsibilities were transferred to the central level. In practice, the responsibility is now divided among the central government, the local government bodies and the private sector.

The MoE is responsible for the education sector policy development, planning, development of sector strategies and regulation of the provision of education and training services by other providers.

At the provincial level, the Provincial Education Office coordinates education activities in the respective province. At the district level, education management, planning, registration and monitoring of schools and teachers fall under the District Education Offices (DEO).

School Management Boards are responsible for primary school management. Secondary schools, and vocational and technical education and training institutions are managed by Boards of Governors (BOGs), and universities by councils. These bodies are responsible for the management of their financial, human and other resources so as to facilitate smooth operations, infrastructure development and the provision of teaching and learning materials.

New schools in Novania are generally initiated by local communities. Once a new school is approved by the MoE, teachers will be deployed to the school and paid by the central government. This demand-driven process has encouraged local communities to build many small schools. The system generated a large financial burden on the central government, which eventually led the central government to abandon its commitment to assign teachers to any school created by a local community and to freeze the existing, largely inefficient and unequal, distribution of schools.

The current Government aims towards both more rationalisation and increased decentralization of the management of education and training services. This requires that the scope of authority at each level of management be well defined and the requisite legal framework established. Under a decentralized system, the role of the Provincial, District and School Boards in education management would have to be reviewed in detail and redefined, considering the fact that most education and training tasks are, in practice, performed at these levels.

Over recent years there has also been growing involvement of NGOs and the private sector in the provision of education and training services in Novania. This has introduced new challenges relating to the management and coordination of the provision of education services.
2.2.2. Strategic management

Legal framework
The legislation governing education sector operations is quite comprehensive. In many respects however, it has not kept the pace with new developments. For example, it has not formalised the expanded role that parents and civil society organizations currently have in the provision of education in general, and particularly in the vocational and non formal education sector. Furthermore, different levels and bodies (school, district, central Teaching Service Commission (TSC), MoE departments) intervene in the staff management in the primary education sector; however, the law does not spell out which specific responsibilities and roles in decision-making remain under the central Ministry thus creating areas of possible conflict.

Budgeting
The public sector has been undergoing continual reform since the early 1990’s, mainly with a view to reducing, or at least limiting public expenditures. The current government places considerable importance on the effective control and close monitoring of public expenditure as a means of reducing corruption, minimizing deviations of budget outcomes from the expected ones and promoting budget discipline. Among other initiatives, the Government has recently started improving its budgeting system and procedures, by establishing a Medium-Term Expenditure Framework. Since the beginning of 2004, a new system of Finance Information and Monitoring is in place which has proved to be very effective in providing relevant data for the control of public expenditures, including in the education sector.

Civil service reform
The education sector, like other sectors, will also be included in the recently adopted civil service reform. In the medium term, the reform will focus on improving the cost-effectiveness of public administration in all areas by rightsizing the civil service, reforming pay structures, and building capacity in the public service sector.

2.2.3. Management structures and capacity of the Ministry of Education

National Level Management
Although the number and variety of players providing education and related services has been growing over recent years, there is presently no effective coordination and no clear reporting mechanisms between the MoE, its various specialised agencies and other ‘actors’ involved in education and training. Specialised public agencies (like the TSC e.g.) tend to report directly to the accounting officers while their services have a direct impact on the technical areas of the sector. Often, the Director of Education and other professional heads in the ministry are not informed of the developments in the various sectors for which they are formally responsible.

The provision of educational services requires guidance and regulation in order to promote and sustain high standards and efficient resource utilization. Issues relating to the weak coordination of education services therefore need to be addressed. A review of the structures and functioning of the MoE could be a necessary first step for strengthening the system.
**Management at decentralised levels**

In most cases, provincial and district education officers act mainly as transmittal agents from the field to the headquarters. They are prevented from playing a more active and efficient role in educational management as they lack the formal power and authority to make conclusive managerial and administrative decisions.

Provincial and district offices generally have staff in sufficient numbers but lack the equipment and financial resources to fulfil their tasks properly.

The government’s insufficient resources to fund the District Education Offices have often resulted in the practice of levying funds from schools to run these offices’ services, including the provision of administrative and inspection services.

Furthermore, many school heads and accounting officers lack the competency in accounting and management. School boards often do not have the capacity to oversee the proper utilization of funds. School and institutional administrators are often appointed without proper consideration of whether they possess the relevant skills in institutional management. It has also been found that the auditing of secondary school finances is weak as a result of unqualified school auditors, and that, until recently, there was no auditing of primary schools at all.

**2.2.4 Monitoring and Information**

The Ministry of Education of Novania is characterised by various weaknesses in communication and information flow. Beyond the lack of regular vertical communication between central planners, policy makers, managers, implementers in the field offices, institutions and stakeholders at the grassroots level, one also observes the serious shortcomings in the horizontal communication and exchange of information between various departments in the MoE dealing with different functions like human resource development, finance, and resource management. Furthermore, there are bottlenecks in the flow of information from senior managers to the planners and implementers at both the national level and in the field. One major reasons for this is the absence of instructions and established channels directing how information should flow from the top to bottom and vice versa.

The MoE of Novania presently lacks an effective Education Management System (EMIS). Electronic networking through e-mail is also non-existent in the MoE, and many officers are not fully computer literate. Computers are normally available in offices that manage projects and in senior managers offices; however, they are used for typing rather than for professional communications. Data collection on school enrolment, facilities, teachers, and other educational personnel are mainly done by the District Education Offices which are seriously understaffed and under-equipped as mentioned before. Furthermore, speedy analysis of this data is constrained by the lack of capacity at the MOE headquarters.

At the headquarters, there are numerous shortcomings in the transmission, timely processing, dissemination and feed-back of the data received from the operational levels. Thus, the data on school enrolment and availability of facilities are sent to the Planning Department at the MoE for analysis, but in some cases it never reaches the Planning Department and when it does, the results of the analysis are not disseminated to all divisions and levels concerned. Furthermore, the capacity of the Planning Department is sometimes insufficient to analyze all the information
collected. In particular, some key Planning Department personnel in the MoE are often called for other tasks, often outside the Ministry, without reference to official hierarchy.

2.2.5 Operational Management

A competent and well-functioning school inspectorate is essential to assure the quality of teaching and learning with sustained efficiency at the school level. A functional inspectorate forms an important channel between policy makers and implementers and regularly monitors the physical facilities, learning resources, quality and adequacy of teachers and the school environment.

To effectively perform these inspectoral functions, the school inspectorate requires adequate funding for travel and accommodation, report compilation, and data processing. Currently, inspection services in Novania are constrained by inadequate budgetary allocations. The inspectors’ mobility and access to office machines is almost non-existent in the field. Given the budget constraints, needs also arise to optimise the staffing and staff utilisation. Particularly in the current context of increasing decentralization of inspection functions at the district level, it will be important to reduce the time that inspectors spend on the organization of co-curricular activities, planning, and implementation of funded projects, etc. to the detriment of their core professional quality-assurance responsibilities.

2.2.6 Human resource management

Currently, the MoE faces serious challenges with respect to human resource development and management. In the past, officers have often been deployed without due consideration to their abilities and past performances. In addition, there has been no system to provide adequate information and the necessary skills to guide those who carry out deployment functions.

At both the headquarters and district level, large proportions of the personnel do not have the requisite qualifications for the positions they hold and are, therefore, professionally handicapped to discharge their duties. There is an urgent need to strengthen the capacities of the human resource involved in providing education services, including those of teachers.

The management of the teaching staff is particularly critical to both cost-efficient functioning of the education sector and the quality of learning outcomes. The Teaching Service Commission is mandated to: register, recruit, transfer, promote and discipline teachers, with the help of school boards, district and provincial education offices. Although these processes are generally well managed, a number of weaknesses must be noted; in particular, unplanned teacher recruitment for public schools has led to an unbalanced distribution of teachers, as most teachers prefer to work in urban and privileged areas where amenities are available while difficult and remote areas continue to suffer a teacher shortage. A study carried out in 2004 revealed that 22% of all primary schools are seriously overstaffed while 15% of the Novanian primary schools are understaffed.

Other problems which should be addressed include the regular interference in teacher management and overlaps in the functions of school at the district and national levels. Alternative modes of recruitment, deployment and management of teachers, therefore, need to be explored and implemented.

Furthermore, with a view to the continuous improvement of the quality of education services, upgrading teacher’s skills deserves more attention. While the vast majority of Novanian primary
teachers have received the formally required pre-service training however adequate opportunities for in-service training are lacking, most practicing teachers are denied the chance to enhance their professional competencies and skills beyond those acquired before entering the teaching service. The current situation calls for an urgent development of comprehensive in-service staff training.
Group Activity:

A. Questions relating to cost, expenditure and financing:

1. What are the indicators used in the presented ESD report on Novania to describe the contribution of households to the financing of primary and secondary education?

2. How has Novania’s level of government expenditures on education in general, and on secondary education in particular, been evolving over recent years?

3. Based on the data and information provided in section 2.1.4, compare and analyse (i) the evolution of the unit cost for primary and secondary education, and (ii) the non salary cost for the same levels of education. Are there any similarities between Novania and your country regarding the share of non salary costs?

4. What kind of measures would you suggest to make more rational use of the public resources available for education in Novania?

B. Questions relating to the management of education:

1. Which major questions relating to the management of education does the presented ESD report on Novania neglect? Name at least one such question and indicate which research instrument would be necessary to generate recent relevant data and information relating to this question.

2. Name two major weaknesses characterising the management of the education sector in Novania? To what extent are these weaknesses also observed in your own country? What kind of measures do you think could be envisaged to address these weaknesses?
UNIT 6. CONCLUSIONS: REASSESSING PRIORITY PROBLEMS AND IDENTIFYING POSSIBLE AVENUES FOR IMPROVEMENT

Unit 6 deals with the last stage of an ESD which is aimed at summarizing the main results and conclusions of the diagnosis carried out, and identifying the priority problems and possible adequate ways to address them.

Unit 6 is divided into two parts:

**Part 1:** In working systematically through the Activities of Units 2 to 5 you should have gained a practical grasp of the analytical framework, the common indicators and tools applied in an ESD and also of how to generate a comprehensive picture of the status and main problems of a country’s education sector.

The ultimate objective of the ESD however is to identify the most crucial concerns for a country’s education sector and to suggest possible policies and strategies for improving the situation. The work to be accomplished at this stage therefore includes: (i) ranking the principal issues identified by their importance to and for each priority theme; (ii) identifying adequate policy responses to address the main problems and challenges identified.

This assessment of priority problems and possible policy responses closing the ESD exercise will be a basis for the analyses and discussions in Module 4 on Analysing and choosing among policy options, evaluating their effects and their acceptability by various stakeholder groups;

**Part 2:** The second part of the Unit is devoted to the last practical activity of Module 3; it is winding-up the exercise on the diagnosis of the education sector of the Republic of Novania.

**Unit objective:**

In this unit you should gain a grasp of the synthesis and prioritisation of the main problems and challenges emerging from an Education Sector Diagnosis and the identification of possible adequate policy responses.

**Unit content:**

- Towards the identification of viable objectives for future educational development;
- Hierarchical synthesis of diagnosis results;
- Establishing a priority list of problems and objectives.
Unit outcomes:
Upon completion of Unit 6 you should be able to:

- Summarise the main problems of a country’s education sector as they emerge from an ESD; and
- Reflect on possible policy responses for addressing the identified problems.

Timeframe:
- The study time required for this module is approximately 8 hours per week.

Group Activity:
After your careful individual reading of this unit you will be requested to work with your colleagues on a group activity related to Part 2. This activity will invite you to critically assess and learn from the way in which major aspects of cost, financing and management of education have been addressed in the ESD example of Novania presented here.

Reading:
For this unit you are recommended to read:

PART 1. FROM THE DIAGNOSIS TO THE PROPOSAL OF FUTURE POLICY RESPONSES

1.1 Introduction

Sector diagnosis is the starting point (phase 1) of the strategic planning process. An important second further stage (phase 2) which will be dealt in Module 4 consists in determining the future direction of policies and strategies for education: policy aims are defined, strategic objectives and targets are formulated, strategies and projects are identified or designed that make it possible to reach the objectives and the required and available resources and restrictions on their implementation are evaluated.

To connect phase 1 and phase 2, it is essential to do a synthesis and put into a hierarchy the main problems that emerge from the diagnosis carried out. With a view to proposing priority improvement strategies, it is also useful at this stage to make an initial global appraisal of the feasibility (financial, political, social, institutional, etc.) of the priority improvement strategies suggested.

1.2 Towards the identification of viable and accepted objectives

In actual fact, it must be recognized that a sector diagnosis can only generate an improvement in the current situation under two main conditions: (1) the realism of the improvement proposals, i.e., not only putting the problems in a hierarchy but even more taking into account – depending on the future policies and strategies recommended on the national and sector levels – existing constraints and most especially financial constraints; these constraints presenting themselves not only in terms of investment but particularly in terms of operating budgets; (2) a participatory approach to be developed between decision-makers, actors and partners to define priorities, target groups, objectives and outcomes to be obtained as well as the major actions to be implemented; for the latter, especially relating to the determination of action modes and responsibilities. In the event in which unanimity is not possible, the question is then one of getting the broadest consensus possible while avoiding any possible immediate blocking factors from certain pressure groups (e.g., the unions).

While sector analyses have included, for quite some time, simulation models and financial feasibility analyses, this approach has changed over the last few years with the advent of new plans and inter-sector programmes such as, for example, the Poverty Reduction Plans and sector supports. In point of fact, whereas until now targeted educational objectives were aimed at through a specific allocation of resources – notably financial – the focus is increasingly being oriented towards financial supports in the state’s budget for global outcomes that often go beyond educational objectives alone. This approach has led to a new dialogue between the government and the co-operation agencies, the implementation of new financial instruments, especially Medium-Term Expenditure Frameworks and the determination of new batteries of outcome (impact) indicators much more difficult to define than the objective indicators
traditionally used. Lastly, it is a question of implementing a new communication policy between the sector and its environment, most especially with business and parents as well as creating new relation modes between the different sectors.

### 1.3 A hierarchical synthesis of diagnosis results

Before being able to move on to the formulation of specific problems and objectives, and therefore of precise programmes or projects, it is necessary to ‘prioritize’ or establish a hierarchy of problems that emerge from the diagnosis and of future strategic objectives that can solve them – or help reabsorb them. Such an exercise should be based on the answers to some major questions concerning the future development of the whole sector; it requires answering the three principal series of questions that follow:

1. Considering the essential contribution of the educational sector to the country’s economic and social development, are there certain levels or types of education and training that should be given priority? What arbitration should be undertaken at the different levels and in the different sub-sectors of education between quantitative objectives (e.g., broadening coverage) on one hand, and qualitative objectives (e.g., improving the relevance of training programmes and the insertion of graduates into the working world) on the other? What pathways could help attain these objectives?

   The answers to this first series of questions naturally depend on the country’s state of development and its educational attainment at different levels. It is a question, in fact, of knowing if education at the primary or basic level is acquired, equitable and of quality for all the children in the age groups concerned. If not, priority should unquestionably be given to this level. Many studies have in point of fact proven that it is at this level that educational investment is most profitable. In the event in which universal primary education is or is being acquired, the next step is now to pose questions on the higher levels and the choices to be made between general and vocational education. For the latter, it also means identifying and justifying the creation or development of different tracks or options and to reflect on the adequate forms of training to be favoured. Lastly, it is advisable to think about higher education, its contribution to the country’s future added value and especially the partnership it develops with the job market.

2. Are there populations that have been neglected by the development of education until now and in what direction should specific policies and strategies go in the future? What are these “disadvantaged” populations at the different levels and in the different sub-sectors? What system should be instituted to meet their specific needs?

   The question of knowing “who” does not go to school and what groups do not benefit from the education system in the same way as others (e.g., girls, young people living in rural areas, the handicapped) is crucial. In fact, these sources of inequality are also sources of exclusion and a waste of potential human resources. Here too, it is not only a question of knowing if the same opportunities are given to everyone, this could also be a source of inequality. Some of these groups need, in actual fact, more resources to reach the average. It is in this direction that the resources to be mobilized to meet the demand of these new particularities are to be identified and taken into account in a view of social equality.
3. Do the current financial and institutional resources/capacities seem adequate for remedying the main weaknesses identified in sector diagnosis? If not, how (through which strategies/measures) could the institutional and financial capacities of the sector be increased?

The fact of having “the means of one's policy” is inseparable from that of having “the policy of one's means” as has been mentioned above. The “means of one's policy” are basically comprised of the human and - more broadly institutional - resources to manage and implement it and the level of budgetary - or other – resources available for its financing.

The new SWAps or the sector support programmes take the need for building institutional capacities into account. This concern is all that much greater because, in the new approach, the sector intervention programmes are no longer managed by the Ministry’s external structures (e.g., the project offices) but by the different administrations directly in charge of the various components to be implemented, each according to its specific responsibilities. It is therefore advisable, starting with the formulation of these programmes, to envisage the initial and ongoing institutional building actions necessary for their development (implementation, monitoring and evaluation) and to do so by maximizing economies of scale as well as taking inter-sector relations into account.

Financial resources, even in terms of investment, cannot continue to depend – for the most part – on external sources as is too often the case in the poorest countries. This situation, still very widespread, is too often the sign of dependence and a source of expenditures that are difficult to control. There is therefore a question of identifying alternative sources of revenue. Among these, turning to the local communities, the private sector and businesses is increasingly favoured. Decentralization or devolution policies are one of its major elements. What remains is therefore to ensure that the education system stays under the state’s control so that social as well as regional disparities are avoided.

1.4 Establishing a priority list of problems and objectives

This “hierarchization” of problems, and consequently the solutions to be found, may be seen from two main viewpoints that intersect: (i) classifying problems according to their scope and (ii) placing them in a hierarchy according to the priority given to their solution.

Putting problems in a hierarchy according to their scope

- A problem can be general or nation-wide, for example, the shortage of qualified human resources. Because of its scope, it very much goes beyond the concerns and jurisdictions of a single ministry or even a single sector. This problem is one of “development” that can only be taken on with a “macro” approach.

- After these types of “macro” problems come those that are sector- or subsector-wide; one example is mediocre student performances (at every level or at certain levels of education). Different interventions may be proposed and combined (as is the case for the “development” problem); a single one will help but not be sufficient to solve this type of problem.
• Further downstream, often at the division or department level, the problems become specific; the expected outcomes of efforts to solve such problems can be specified; each of the specified outcomes constitutes an element in the solution to the specific problem in question.

**Putting problems in a hierarchy according to the priority given**

Creating a hierarchy of problems from this viewpoint is not easy because the decision-makers do not always share the same criteria and concerns. For some of them, the economic perspective, in which priority should be given to problems whose solution promises to be more “profitable” (optimal ratio between the resources invested and the effects), is dominant.

This is generally the attitude of the representatives of ministries of finance and certain donors.

For others, and most often this reflects the viewpoint of the ministries of education, it is the pedagogic aspect (i.e., the anticipated effect on learning and its outcomes/consequences for the learner) that prevails. For other groups, the social or environmental aspect should be what determines the hierarchy of problems.

In fact, the more the problems diagnosed and the objectives to be met are specified in detail, the more the “hierarchization” exercise should bring the actors and targeted publics concerned into the picture and take their viewpoints into consideration. But the “feasibility” of the solutions proposed must not, however, be overlooked.

Not only policy choices and financial possibilities but also the evaluation of urgency vis-à-vis the target publics and the realism of the technical and institutional solutions proposed are elements to be taken into account in the sector analysis process in general and in the “hierachization” of its main outcomes in particular.
PART 2. REASSESSING PRIORITY PROBLEMS AND SUGGESTING MEASURES FOR SECTOR AND SUB-SECTOR IMPROVEMENT IN NOVANIA

A large number and variety of problems and shortcomings characterizing a country's education sector and its management (in this case, the Republic of Novania) emerged from the comprehensive analytical work you accomplished. When carrying out this last practical ACTIVITY, it is useful to recall some of the key messages picked up during the preceding units of the course:

- Not all of them can be considered as equally urgent or important;
- Not all of them can or should be addressed at the same time;
- The solution to the problems often go far beyond the sub-sector and even the entire sector studied; and

(In addition: All measures of improvement are not equally promising or equally acceptable by all the actors and other stakeholders; but this issue will be taken up in Module 4)
Group Activity:

Refer back to the example of Novania and to what has been presented in Units 2-5 on the functioning and performance of primary education in this imaginary country. Then work individually, and discuss the questions below with the colleagues of your country group. When elaborating your proposals for improving the situation in primary education, you should consider the specific context and constraints faced by the authorities in Novania, but it would also be very useful if you could refer to experiences from your own country.

A. Conclusions on priority problems emerging from the ESD in Novania

Review your group reports on Unit 2-5 and identify the priority problems characterizing the education sector, in particular the primary education sub-sector in Novania.

1. Establish a list of the most crucial issues/problems identified (8 to 10) and rank them by order of priority.

2. Select the most crucial (5-6) of the problems identified, list one or two major possible causes for each of them; then explain why you identified them as priorities (2–3 sentences relating to each of the problems). You may wish to group the issues/problems by ‘angle of analysis’/content, such as the following: ‘Access and student flows’; ‘Inequalities’; ‘Quality and relevance of education’ or ‘System management’, etc.

B. Suggesting adequate measures for improving the situation in primary education

For each problem indicate two promising policy responses/types of measures to include in the next medium term plan for primary education in Novania. Again, please group the interventions proposed by angle of analysis or major issue, e.g. ‘Improving access and internal efficiency’; ‘Combating education inequalities’, ‘Improving teacher effectiveness’, etc.

The group report (of 4-5 pages altogether) should include a table summarising the priority problems and suggested policy responses (you may use or adapt the grid suggested in Appendix 2 to Unit 6), as well as an explanatory text.
APPENDIX 2

Table 1. Priority problem and proposed improvement measures (examples)

<table>
<thead>
<tr>
<th>Priority problem</th>
<th>Improvement measures</th>
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<tbody>
<tr>
<td>1) Deterioration of the quality in primary education</td>
<td>• Continuous in-service training &amp; support for the teachers;</td>
</tr>
<tr>
<td><strong>Priority because risk of:</strong></td>
<td>• Free textbooks in core subjects for every pupil;</td>
</tr>
<tr>
<td>- Primary school leavers not attaining the fixed learning objectives.</td>
<td>• Improve instructional practice with supporting structures materials.</td>
</tr>
<tr>
<td>- Low internal efficiency leading to increased dropout and grade repetition.</td>
<td></td>
</tr>
<tr>
<td><strong>Main causes:</strong></td>
<td></td>
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<tr>
<td>- Lack of teaching and learning materials.</td>
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<td>Problem N° 2:</td>
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<td>Problem N° 3:</td>
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