

MODULE 2

Assessing the local educational environment

This module consists of seven sections. Each section gives some stimulus materials to be read, some questions for discussion, and some background and summary points to facilitate understanding. At the end of the sections there is suggested further reading for the module.

Having looked at the international environment and the implications for educational financing in Module 1, it is now necessary to survey the local educational environment to be able to determine the needs of the system and the kinds of interventions necessary in the local educational environment. Scanning the local environment will help to determine, in the light of international trends and national development goals, at which level intervention is required, i.e. preschool, primary, secondary, tertiary, and what kind of intervention is required – teacher training, curriculum development, resources and administrative training or capital expansion.

SECTION 1

At the end of Section 1 the participant should be able to identify the key policy issues affecting educational planning.

In this and following sections we will clarify the four main issues for policy analysis in setting priorities and programmes for educational development and financing. Policy analysis is the process by which relevant information is provided in order to guide the determination of policy options.

Instruction 1

Read Box 1.

Box 1

Four main policy issues

1. The efficiency of the education system must be maximised.
2. The education system must meet the manpower needs of the economy.
3. The education system must respond to individual demand for education.
4. The education system must respond to the needs for social equity in terms of its provisions.

Activity 1

Study the four policy issues in Box 1 and reflect on your own country. In setting up an overall policy framework to guide educational expansion, are these the four most critical issues?

We will proceed now to examine each of these four issues and the key measures, indicators and concerns of each in the following four sections.

SECTION 2

At the end of Section 2 the participant should be able to:

1. Explain internal and external efficiency;
2. Use relevant measures of internal and external efficiency.

Here we take a look at the concepts of efficiency in education.

Instruction 2

Study Box 2.

Box 2

CONCEPTS OF EFFICIENCY IN EDUCATION

Efficiency is a term used to describe the relationship between inputs and outputs, but because this relationship can be analysed from several perspectives, judgments about efficiency may have to take into account more than one aspect of the relationship. Investment decisions, for example, need to consider both external and internal efficiency. The problem is that educational output is too complex to allow us to adopt a single index of either external or internal efficiency.

As we have already seen, the objectives of society are used to measure external efficiency, which can be judged by the balance between social costs and social benefits, or the extent to which education satisfies manpower and employment needs. More specifically, the external efficiency of schools may be judged by how well schools prepare pupils and students for their roles in society, as indicated by the employment prospects and earnings of students. Such measures depend on external criteria rather than on results entirely within the school.

In contrast, internal efficiency is concerned with the relationship between inputs and outputs within the education system or within individual institutions. Output in this case is measured in relation to internal institutional goals rather than the wider objectives of society. Clearly, the two concepts are closely linked, but it would be possible to envisage a school that was extremely efficient in developing skills and attitudes that were not highly valued in society as a whole. In such circumstances, the criteria of internal and external efficiency would conflict, and the school would be judged to be internally efficient but externally inefficient.

Activity 2

1. *What do you understand by internal efficiency?*
2. *What do you understand by external efficiency?*
3. *Can you come up with some measures of internal and external efficiency?*
4. *What difficulties do you envisage in providing indices of internal and external efficiency?*

In some countries it is possible that schools can claim to be internally efficient, i.e. a large percentage of their students are successful at exams. However, these students may be unprepared for the world of work. There exists, then, conflict between criteria for internal and external efficiency.

Indicators of Efficiency

Indicators of efficiency are very useful at this point in time where most countries face adverse financial circumstances and the central challenge to educational managers is to find ways to use limited resources more efficiently and effectively. Cost analysis can help educational managers to see the various options and tradeoffs available to them and assess their relative merits and demerits. Cost analysis can reveal waste and inefficiency and alternative ways of deploying resources between levels and types of education.

Instruction 3

Read Box 3. These are just some of the efficiency or cost indicators that can be used to assess the educational arrangements on the ground.

1. Can you think of other indicators?

Box 3

Efficiency Indicators

- | | |
|------------------------|---|
| 1. Unit costs | 6. Teachers' salaries |
| (a) cost per graduate | 7. Recurrent costs |
| (b) cost per classroom | 8. Capital costs |
| (c) cost per school | 9. Education costs as percentage of GDP |
| 2. Enrolment ratios | 10. Cost by levels, |
| 3. Attendance rate | i.e. preschool, primary, |
| 4. Dropout rate | secondary, tertiary. |
| 5. Repetition rate | |

Instruction 4

Read Box 4. This is taken from a 1993 World Bank study of the Caribbean.

Box 4

Repetition/Attendance/Dropouts

The situation in Haiti and the Dominican Republic appears to be much worse than in English-speaking countries, as Table 2.1 demonstrates. The data shows even distributions of enrolments across primary school classes and relatively low repeaters in both Jamaica and Trinidad. In Haiti and the Dominican Republic, however, enrolments fall substantially and repeater levels are two to three times as high. Apparently only one-third of primary school entrants in Haiti complete the cycle.

Table 2.1. Haiti, Dominican Republic, Jamaica and Trinidad: Indicators of Primary School Efficiency

	Haiti	Dominican Rep.	Jamaica	Trinidad
Percent distribution of primary enrolment				
Grade 1	41	35	21	21
Grade 2	20	19	20	21
Grade 3	16	17	20	20
Grade 4	13	15	20	19
Grade 5	10	14	19	19
Repeaters as a percentage of total enrolments				
1980	21	18	4	4
1985	10	13	4	5
Percentage of primary intake reaching terminal grade				
1975	—	—	75	—
1985	32	—	—	—

Source: Lockheed and Verspoor, 1990

In summary, as the above data highlight, many countries in the Caribbean region experience high rates of grade repetition. While the dropout rates in English-speaking countries appear to be low, in some countries, particularly the Dominican Republic and Haiti, school desertion also is high. The usual argument in favour of repetition is that it is preferable to make a low-achieving child repeat a class to ensure that all material in that grade is mastered, rather than allowing the child to proceed to the next grade. However, repetition has many disadvantages. It encourages

dropout, as the repeating child may become demoralised, particularly as he/she inevitably must repeat some material already mastered. Further, his parents may decide that the opportunity costs of schooling are too great.

Caribbean Region – Access, Quality and Efficiency in Education. Washington DC: World Bank, 1993, p. 67

Activity 3

1. *Discuss the possible implications for educational policy.*
2. *How does it compare with your country?*

Instruction 5

Read Box 5.

Box 5

Recurrent Unit Costs by Education Level

Interpreting comparative data on expenditures by distinct education levels across countries requires some yardstick. One useful measure is the difference in unit costs of providing primary, secondary and tertiary education in the Caribbean, the most recent estimates of which are presented in Table 2.2.

Table 2.2. Caribbean – Recurrent Government Education Expenditures: Unit Cost per Level (in US\$ Equivalent)

Country/Level	Primary	Secondary	Tertiary	University
Antigua	251	423	1287	—
Dominica	250	449	1201	—
Grenada	160	256	807	—
St. Kitts	221	313	1604	—
St. Vincent	213	1783	—	—
St. Lucia	209	579	1873	—
OECS Countries Average	217	382	1426	—
Bahamas	640	1010	1200	—
Belize	157	362	699	—
Barbados	672	913	1200	—
Guyana	26	54	146	858
Jamaica	101	257	639	5138
Trinidad	596	811	—	10510
Haiti	44	101	—	—
Suriname	445	911	3156	5538

Other than Grenada, with a relatively low cost structure, close similarities appear to exist across the OECS countries in the unit costs of education. On average, primary schooling costs US\$217 per student, secondary US\$382 and tertiary (non-university) US\$1,426. Substantial variation exists between costs, by level, among the other English-speaking countries, however. Although unit costs at the primary level average US\$366 within this group of countries, the range is vast, from US\$26 in Guyana to US\$672 in Barbados. At the secondary level, costs within this country grouping tend to be two to three times higher than those in the OECS countries. The notable exceptions are Belize, with costs similar to the OECS countries, and Jamaica and Guyana in which average costs are lower. At the tertiary non-university level, also, only Jamaica, Belize and Guyana are exceptions, with other English-speaking countries having unit costs similar

to the OECS group. Estimated expenditures per student in higher education (including overseas scholarships) also point to differences between Jamaica and Guyana and the other campus countries.

Source: See Statistical Appendix (I) of The World Bank Report

Activity 4

1. What might contribute to the disparity in unit costs between territories?
2. What contributes to the disparity between levels?
3. What policy implications does this structure of cost imply for expansion of the system?

Instruction 6

Read Boxes 6 and 7.

Box 6

Table 2.3. Caribbean – Recurrent Government Education Expenditure as a Share of GNP, 1984–88 (per cent)

	1984	1985	1986	1987	1988
Country Expenditure					
Antigua	2.5	2.2	2.8	2.4	—
Dominica	5.7	5.2	5.3	5.1	4.9
Grenada	6.4	6.1	5.5	4.6	4.6
St. Kitts	4.1	4.0	4.0	3.8	3.5
St. Lucia	7.2	7.5	7.2	7.8	8.6
St. Vincent	5.9	5.7	5.8	6.0	6.1
Belize	4.3	4.4	5.3	4.4	3.9
Bahamas	—	4.6	—	4.3	—
Barbados	5.5	6.0	5.3	5.9	5.4
Guyana	—	—	—	—	2.9
Jamaica	5.2	5.4	4.7	4.1	4.8
Trinidad	5.1	5.0	5.0	5.6	—
Haiti	1.0	1.0	0.9	1.4	—
Dominican Rep.	1.7	1.5	1.4	1.3	1.3
Suriname	11.0	11.1	9.9	9.6	9.0

Note: Expenditures for the Dominican Republic are current and capital

Source: See Statistical Appendix (I) (Caribbean Region, *op. cit.*)

Box 7

Table 2.4 Caribbean – Fiscal Education Spending as a Share of Total Government Recurrent Expenditure, 1984–88 (percent)

	1984	1985	1986	1987	1988
Antigua	12.6	11.5	12.5	11.5	—
Dominica	18.9	17.7	19.0	19.4	19.1
Grenada	19.8	19.1	18.6	15.7	17.5
St. Kitts	19.3	19.2	20.0	17.7	17.0
St. Lucia	25.1	24.3	23.7	24.1	24.1
St. Vincent	21.3	20.7	22.4	25.2	20.6
Belize	20.2	19.8	22.3	20.7	19.6
Bahamas	—	24.5	—	24.1	—
Barbados	21.1	21.7	20.4	20.5	19.3
Guyana	—	11.3	10.3	7.0	9.0
Jamaica	16.6	14.5	16.2	18.1	16.7
Trinidad	17.1	—	17.4	18.3	—
Haiti	10.3	10.0	10.0	15.4	—
Dominican Rep.*	3.6	11.3	9.9	8.0	9.1
Suriname	25.6	24.9	22.8	26.0	25.7

*Expenditures for the Dominican Republic are both current and capital.

Source: See Statistical Appendix (I)

Activity 5

1. How do the countries of the Caribbean compare in the percentage of the budget dedicated to education?
How do they compare in the percentage of GDP dedicated to education?
2. What do these trends reveal when one considers the need to improve education in these territories?

External efficiency

In considering the external efficiency of the education system the policy maker has to consider the outcomes of education. Do the school leavers get jobs? Do they have the right types and combination of skills? Are they able to perform in the workplace?

Instruction 7

Study Box 8.

Box 8

Table 2.5. Caribbean – Probabilities of Different Levels of Educational Achievement across the English-speaking Countries

	Antigua	Barbados	Belize	Dominica	Grenada	Guyana	Jamaica	St. Kitts	St. Lucia	St. Vincent	Trinidad
Enter Primary 1	100	100	100	100	100	100	100	100	100	100	100
Complete Primary	98	100	59	93	95	80	85	97	93	98	100
Enter Post Primary	43	4	**	**	48	54	32	4	50	39	23
Enter Secondary	55	96	35	25	45	26	53	93	23	39	70
Complete Secondary	**	**	21	**	38	26	53	**	21	**	65
CXC Stream	55	**	21	25	***	26	32	43	21	35	65
CXC English	28	**	8	7	12	3	8	18	9	13	(24)
CXC Math	18	**	6	7	8	3	7	15	7	11	(19)
4 + CXC	4	8	2	2	3	2	3	4	2	4	5
Take 'A' Levels	**	5	2	3	5	***	3	5	2	6	7
Pass 2+ 'A' Levels	**	**	1	1	1	***	**	2	1	1	2
Enter other Tertiary Institution	**	42	5	3	3	6	7	9	4	4	10
Enter Caribbean University	1.5	3	0.25	0.25	1	2	2	2	1	0.5	3

Notes 1. The probabilities are based on each 100 primary entrants.

2. ** indicates a data gap

3. *** indicates not applicable

4. CXC is the Caribbean Examinations Council.

5. 'A' Level is the General Certificate of Education Advanced Level which is required for entry to U.W.I.

Source: Caribbean Region., *op. cit.*

Activity 6

1. *What does it suggest about the achievements in the Caribbean at the primary level?*
2. *Is our output at the secondary level adequate?*
3. *What does this table say about the tertiary level?*
4. *What implications are there for policy?*

We must keep in mind that at the turn of the century we need to produce a larger cohort of university graduates. In addition, the level of skills required for certain jobs will not be forthcoming and this will worsen the situation of structural unemployment.

Another set of outcomes required in the Caribbean focuses on the need to prepare children so that the problems of drug addiction, teenage pregnancy, youth delinquency and crime would be reduced.

At this stage we have considered the indicators required to determine the internal and external efficiency of an educational system. We have done so by examining the indicators for the Caribbean.

SECTION 3

At the end of Section 3 the participant should be able to:

1. Explain the concept of manpower planning;
2. Identify some problems with this approach.

Does the educational system satisfy the manpower needs of the country?

The question of satisfying manpower needs is the second key question the policy maker must deal with.

Instruction 8

Read Box 9.

Box 9

Although fraught with dangers and besieged by criticism, the idea that a country's future manpower structure can be predicted and the forecasts used as a basis for planning the scale and type of education investment has remained popular. The most popular method sets out to use projected output targets for each sector in the economy in order to derive manpower and education targets for each industry or sector.

Activity 7

1. *Can you see dangers in this process?*
2. *What assumptions have to be made about the future for each sector as far as technology and prices of inputs and outputs?*

'Despite the weaknesses however, the overall conclusion to date is that manpower projections are not bad in themselves if they are carried out realistically – that is, if it is recognised that they are subject to wide margins of error and do not reflect hard and fast requirements of economic growth' (Psacharopoulos and Woodhall, 1986). When complemented by other studies of the labour market, manpower projections can give policy makers a sense of the needs education must satisfy. While the practical application of the manpower approach has revealed a number of flaws, the broad logic of the manpower approach is extremely sound. The development of human resources through the educational system is an important prerequisite for economic growth and a good investment of scarce resources, provided the pattern and quality of educational output is geared to the economy's manpower needs.

Such studies, along with the manpower forecasts, will determine where there is excess demand and where scarcities exist. Where does unemployment exist? How long have graduates taken to get jobs on the labour market? All of this will help to determine whether the forces of demand and supply on the labour market can deal with possible excesses and shortages.

SECTION 4

At the end of Section 4 the participant should be able to explain the use of private demand in educational planning.

Instruction 9

Read Box 10.

Box 10

Responding to private demand

Because the terms social demand and private demand are often used interchangeably, confusion sometimes arises in discussion of demand. The total number of pupils or students enrolled in an education system is the result of a series of private investment decisions. Together, however, these private decisions constitute social demand. It has been suggested in some developed countries that social demand should be the criterion for educational investment decisions.

Psacharopoulos and Woodhall, 1986, p.108

Activity 8

What do you understand by the social demand approach to educational planning?

In addition to demographic trends, promotion, repetition and dropout rates, a knowledge of private demand is essential to be able to forecast enrolments accurately. The aggregation of the sum of individual demands constitutes what is called the social demand for education under the prevailing cultural, economic and political circumstances. If there are fewer classrooms and places than there are serious candidates to occupy them, one can say that social demand exceeds supply.

Coombs (1970) identifies three criticisms of the social demand approach. Firstly, 'it ignores the larger national problem of resource allocation and implicitly assumes that no matter how many resources go to education this is their best use for national development'. Secondly, 'it ignores the character and pattern of manpower needed by the economy'. Thirdly, 'it tends to over-stimulate popular demand, to underestimate costs, and to lead to a thin spreading of resources over too many students.'

Instruction 10

Read Box 11.

Box 11

Economic analysis of the private demand for education must take into account a number of factors that help to determine demand such as:

- private costs of education including both earnings foregone and fees
- other direct costs such as expenditure on books or materials
- gender and region
- expected increase in lifetime earnings
- level of personal disposable income
- unemployment rates

Activity 9

1. *Could you show how each of the factors listed above affects the private demand for education?*
2. *Are there cultural reasons why girls may sometimes not be sent to school as readily as boys? At low income levels some families may not be able to afford the incidental costs of schooling. In some cultures children may be kept at home to work the fields.*

Private rate of return

If we can estimate how individuals value an investment in education, then we can project what type of demand for education would exist. Reducing this estimate to a rate allows us to discern the strength of that demand.

Instruction 11

Study Box 12.

Box 12

Rate of Return for a 3-Year Degree Programme

Direct Costs	Yr 1	Yr 2	Yr 3
(a) University fees	—	—	—
(b) Accommodation	—	—	—
(c) Books	—	—	—
Indirect Costs			
(a) Transport	—	—	—
(b) Daily living expenses	—	—	—
(c) Photocopying	—	—	—
Income Foregone	—	—	—
Total	xxx	xxx	xxx
Benefit	Yr 1	Yr 2	Yr 3
Expected Earnings	—	—	—

This is a very simplified approach to estimating a rate of return. From the example it is clear that we need to cost the degree programme over the three years. If we can then establish the stream of earnings the student is likely to earn after qualifying, we can infer that the bigger the expected earnings are compared to projected costs, the higher is the private rate of return. The rate of return for different occupations or fields will convey to the educational planner the strength of demand in that field, as well as the possibility of making students in those areas where private rates of return are high bear some of the costs of education.

SECTION 5

At the end of Section 5 the participant should be able to:

1. Determine the state of inequity in his or her own country;
2. Advance indicators of inequality;
3. Suggest educational interventions.

The question of equity

The fourth question which policy makers must address in an assessment of the local educational environment is the question of equity. Equity is a crucial consideration for continued stability. Equity does not mean equality. It may be more practically defined as 'unequal treatment for unequal partners'.

Instruction 12

Read Box 13.

Box 13

Four questions in particular need to be examined if we are to determine the effects of educational investment on equity.

1. How are educational resources and facilities distributed among different areas or groups?
2. What are the effects of government subsidies for education on the distribution of total income or welfare?
3. Can educational investment be used to redistribute wealth, income, and opportunities between rich and poor?
4. How effective is education as a redistribute tool?

Psacharopoulos and Woodhall, 1986, p. 244

Activity 10

1. *What indicators of equity is it necessary to focus on?*
2. *How does your country fare by these indicators?*
3. *Compare access to education in your country by gender, ethnicity, location, income level.*
4. *How have redistributive policies worked in your country?*

Instruction 13

Read Box 14. These findings certainly provide evidence that educational provision can affect income distribution.

Box 14

The general conclusion of various studies appear to show that:

- (a) Education may raise the overall level of income and thus reduce the absolute level of poverty.
- (b) It may change the dispersion of income.
- (c) It may open up new opportunities for the children of the poor and thus act as a vehicle for social mobility.
- (d) Alternatively, if participation is confined to the children of the rich, education may simply transmit intergenerational inequality.
- (e) The pattern of financing, in particular the extent of subsidies or fees may redistribute income.
- (f) If certain groups obtain higher rewards from their education than others then inequality is perpetuated.
- (g) Education may interact with fertility, morality, health, nutrition and other aspects of development that affect income distribution.

Psacharopoulos and Woodhall, *op. cit.*, p. 267

Activity 11

1. *What is the state of income distribution in your country?*
2. *How can a change in access affect the state of inequality?*
3. *How can a change in subsidies work to remove inequality?*
4. *How can the implementation of user fees affect distribution?*

It is important to note that overall social policy is necessary to tackle the problem of income inequality. Educational financing and provision is one tool which can also contribute to this purpose. The impact of educational interventions can be limited by certain barriers. For example, when there is race or gender discrimination practised in the labour market, more educational provision does not resolve the problem.

SECTION 6

At the end of Section 6 the participant should be able to use all the concerns of the previous sections to assess the local educational environment.

Assessing the context and setting priorities

Having addressed the previous policy questions we can now assess the local educational context. Where does inefficiency exist? Where does inequality exist? What is the projected demand for various skills and occupations? What is the private demand in different areas? At what level is intervention necessary – pre-primary, primary, secondary, tertiary? Do we need to expand enrolment or concentrate on effective delivery? Do we need to emphasise teacher training, administrative development, school feeding, transport or other support services. What is the appropriate mix of options required to suit our needs at this point in time?

Instruction 14

Read Box 15.

Box 15

Framework for policy analysis

1. After analysing the context and identifying weaknesses and needs, keeping in mind the constraints of resources and outlook of the government of the day, the policy makers must set priorities and options. The full range of possibilities must be represented.
2. Policy makers must be mindful of the differences between policy analysis and decision making. Policy analysis is broad. Policy will set up a framework for decision making, but decision making will be affected and conditioned by other unquantifiable factors.
3. Policy analysis must always warn of the cost of inaction.
4. Policy analysis must at times engage the political environment. This may broaden the range of options.

Activity 12

1. *Examine any education plan for your country. Is the policy framework set out at the beginning?*
2. *In this plan what is the relationship between the policy framework and the action plan?*
3. *What mix of intervention strategies does your plan recommend?*
4. *How does the plan justify the mix of options recommended?*
5. *Do you agree with the assessment of the local educational environment?*

SECTION 7

At the end of Section 7 the participant should be able to articulate a theory of school improvement which would inform the educational response.

Instruction 15

Read Box 16.

Box 16

Having analysed the local educational environment and having determined its weaknesses and strengths, the policy makers must come up with a mix of options for the system as a whole. The mix of options would be strongly influenced by the theory of school improvement possessed by the policy makers. What do people mean by a good school or a bad school? Are schools seen as important vehicles for social change? What benefits are there in a decentralised school environment? What concept of education do the policy makers wish to institute?

Activity 13

1. *How would options for change be affected at the level of ministry, school, teacher if there is a fundamental thrust to decentralisation?*
2. *How would options for change be affected if education emphasised process rather than achievement by exams?*
3. *How would options for change be affected if there is a renewed emphasis on the power of schools as social agents of change?*

Suggested reading

Caribbean Region – Access, Quality and Efficiency in Education (1992). World Bank.

Country Study. Washington DC.

Coombs, Phillip H. *What is Educational Planning?* International Institute for Educational Planning. UNESCO.

Davies, B and Ellison, L (1977). *School Leadership for the 21 st Century*. London: Routledge & Kegan Paul.

Psacharopoulos, George and Woodhall, Maureen (1986). *Education for Development*. World Bank Publisher. Oxford: Oxford University Press.

Ruscoe, G C (1980). *The Conditions for Success in Educational Planning*. International Institute for Educational Planning. UNESCO.