

SECONDARY EDUCATION FINANCE STUDY

ON BEHALF OF

THE GOVERNMENT OF THE CO-OPERATIVE REPUBLIC OF
GUYANA

THE MINISTRY OF EDUCATION AND CULTURE

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ABBREVIATIONS

CHS	:	Community High School
CPCE	:	Cyril Potter College of Education
CXC	:	Caribbean Examination Council
DfID	:	Department for International Development
ERP	:	Economic Recovery Program
GEAP	:	Guyana Education Access Project
GOG	:	Government of Guyana
GSS	:	Government Secondary School
HEE	:	Household Education Expenditure
HIES	:	Household Income and Expenditure Survey
HIPC	:	Heavily Indebted Poor Countries
IDB	:	Inter-American Development Bank
IEE	:	Institutional Education Expenditure
MEC	:	Ministry of Education and Culture
PEE	:	Private Education Expenditure
SSPE	:	Secondary School Proficiency Examination
SSRP	:	Secondary School Reform Project
USE	:	Universal Secondary Education
WB	:	World Bank

Executive Summary

Consultancy title

Secondary Education Finance Study in Regions 6 and 10 – analysis of key factors impacting on the financing of secondary education as a contribution to the MEC's understanding of and planning for the financing of universal secondary education (USE).

Context of the consultancy

The Government of Guyana (GOG) has made several high level commitments to accelerating the process of USE. Planning for USE has to be seen against the background of:

- (i) Ongoing developments, notably the development of the Strategic Plan (2002-2007);
- (ii) The need to link planning for the education sector within the framework of other GOG concerns, such as work on the PRSP and the timeframe for ensuring GOG benefits from the HIPC payments;
- (iii) Work by projects other than GEAP, notably SSRP, in support of widening access to quality secondary education;
- (iv) Increasing political pressure to achieve USE within a relatively short time frame.

Objectives of the consultancy

The objectives of this analysis are to provide the GOG/MEC with (a) some models for assessing comparable supply and demand side data from all ten regions; and (b) some issues and indicative per capita costs that can be utilized for the purpose of supporting the critical debate that is required with regard to the commencement of USE among the different stakeholders. The objective of the analysis therefore has not been the production of a report that specifically generates cost scenarios or outlines definitive paths toward USE within the two regions.

For the purposes of capacity building and ownership, it is considered critical that, in the first instance, the individual regions are encouraged and supported in the generation of their own projections with a view to each region possibly taking different incremental approaches toward USE in 2005. It is evident already, for example, that Regions 6 and 10 are at different stages in their understanding of USE and preparing for their respective responses to instituting USE by that year.

Background and Rationale

By the mid 1990s Guyana had succeeded in restoring stability through the implementation of the Economic Recovery Program (ERP). As a result of improved economic conditions and a stronger Government of Guyana (GOG) commitment to education, government expenditures on education had increased by 1997-1999 to an average of 5.2 percent of GDP and over 13.3 percent of total government spending.

However, in spite of this increased spend on education, the country lags behind other Caribbean countries with regard to the proportion of the budget spent in the sector. It also lags behind in terms of CXC, where it has the worst results in the region. Most significantly, the education sector in Guyana still faces a number of serious barriers as it looks to implement a policy of universal secondary education by 2005.

There are large urban-rural quality gaps. Over 50% of the primary teachers and 40% of the secondary teachers lack professional training. It is difficult to place and retain better-qualified teachers especially in rural schools. Irregular attendance and inadequate performance incentives undermine teacher and student performance for teachers. The quality and relevance of programmes at all levels need review.

The quality and equity of spending, with low operational budgets and lack of poverty-indexed resource allocation mechanisms, needs improvement. Mechanisms for regulations and accounting of parental contributions are also underdeveloped; furthermore, the education system remains highly centralized and has limited delegated authority and few incentives for change. There has been significant staff training. Yet the impact of this training effort has yet to be felt and the effort is still perhaps being undermined due to such factors as the absence of performance-based remuneration schemes, inefficient organizational and communication systems, and inefficient staff deployment and appraisal mechanisms.

The GOG has made poverty reducing economic development its main priority, and it recognizes that improving the Guyana education system will have clear benefits in terms of increased productivity, improved health, and poverty eradication. The Ministry of Education and Culture (MEC) is undertaking a comprehensive sector policy and strategy review, and a work plan is being prepared that will result in the provision of an education sector development plan and support program by the end of the fiscal year 2001.

The Guyana Education Access Project (GEAP) (1999-2003) aims to pilot full access to secondary education in its two target areas within Regions 6 and 10. Inputs are focussed on five main areas: (i) provision of new/refurbished schools; (ii) increasing access and participation; (iii) improving teaching and learning; (iv) improving educational management; and (v) the procurement of support resources (computers, books and teaching/science materials). In addition, GEAP is charged with informing and supporting MOE/GOG initiatives aimed at replicating the positive experiences and lessons derived from the project's activities in Region 6 and 10 when the GOG implements its intended roll-out of universal secondary education in 2005.

Section One – Current Supply & Demand Expenditure on Secondary Education

1.1 Introduction

1.1.1 The first part of this section attempts to establish what is currently spent per capita in order to educate a pupil in secondary school. The supply side data was primarily gathered from the central MEC, the Regional Education offices in Regions 6 and 10, and from five government secondary schools. The demand side data was gathered in discussions with school administrators, local community workers and parents. The data for Appendix Two (*Demand-Side Costs*) was gathered in discussions with the heads of the respective CPCE centres at Linden and Rose Hall as well as from discussions with teachers who were enrolled on the programmes.

1.1.2 It was intended at the outset that the study determine differences in per capita costs (both supply and demand side) across the three tiers of secondary school (GSS, CHS and Primary Tops); however, this exercise was not possible given that the budgetary process does not disaggregate according to the different type of school. In fact the present system of line budget accounting made the process of accessing and identifying the allocation of financial resources complex.¹

1.2 Public Expenditure – at the central and regional levels

1.2.1 This section examines the extent to which the government currently subsidizes secondary education.

1.2.2 Figures for this subsidy in relation to 2 sample schools are provided in Tables 1A and 1B on pages 10 and 11 below. These tables are based on an analysis of (i) the human resource and non-salary recurrent operating costs for schools of 600 learners in Region 6 and 750 learners in Region 10 respectively; (ii) an estimate of the cost of the MEC's and the Regional Offices sector management and operational support; (iii) capital costs including furniture, equipment, textbooks and buildings; and (iv) the per student public sector spend in Regions 6 and 10 for each of these cost items.

1.2.3 A number of assumptions relating to costs are built into these analyses, and in order to read the tables correctly these assumptions are presented on pages 8 to 10 below, before the tables themselves are given. Four categories of costs are explained:

- (1) Human Resource costs
- (2) Other recurrent costs
- (3) Overhead administrative costs
- (4) Capital costs

¹ See the World Bank financed *Secondary School Reform Project -Education Finance and Budget Report* (2001) by Simon Fraser for an in depth details regarding the budgetary process.

1.2.4 Assumptions

(1) *Human Resource costs* - Table 2 indicates the assumptions in terms of Human Resource costs underpinning Tables 1A and 1B on pages 10 and 11 respectively

Table 2: Basis for Assumptions for Human Resource allocations

Region 6 (600 students) – number of staff	Title of person	Salary per month (Guyanese dollars)	Region 10 (750 students) - number of staff
	<u>1. Administration</u>		
1	Headteacher	84,505	1
1	Deputy Headteacher	71,506	1
3	Senior Masters	63,705	4
6	Heads of Department	63,705	6
	<u>2. Teaching staff</u>		
-	Graduate	63,705	4
14	Trained	36,074	14
10	Untrained	20,073	13
	<u>3. Clerical staff</u>		
1	School clerk	22,800	2
2	Janitors	20,728	6
	<u>1. Librarian/technical</u>		
1	Librarian	20,728	1
-	Laboratory assistant	23,728	1
	<u>2. Cleaners/watchmen</u>		
2	Cleaners	12,000	3
3	Watchmen	18,000	3

(2) *Other recurrent costs* - the other recurrent items in Row B in Tables 1A & 1B have been obtained from the respective budgets of the Regional Education offices. The budgetary items are then divided by the number of students in the secondary sub sector excluding those in Primary Tops for whom the budget is aggregated under Primary (i.e. Region 6 is 9,122 students and Region 10 is 2,943 students).

(3) *Overhead Administrative costs* - Table 3 indicates how the figures were generated for Regional Administrative costs, while following Table 3 are the assumptions underlying the calculations for MEC Administrative costs:

Table 3: Basis for Assumptions of Regional Administration costs

Category	Region 6	Region 10
Total number of students	Nursery: 7,671 Primary: 16,719 Secondary: 10,581 Total: 34,971	Nursery: 2,073 Primary: 5,949 Secondary: 3,922 Total: 11,944
Secondary as percent of total	30 percent	32.7 percent
Total recurrent administrative costs	G\$ 504,340,000	G\$ 352,732,000
Secondary recurrent costs	G\$ 151,302,000	G\$ 116,402,000
Per student cost allocation	G\$ 16,586	G\$39,552

(3) *Overhead Administrative costs (cont.)* - MEC administrative costs have been estimated on the following basis:

- Total recurrent costs are G\$ 2,378,759. These costs are apportioned (in G\$ '000) as follows: Main office (G\$ 142,769), National Education Policy (58,706), Ministry Administration (G\$ 352,512), Training and Development (G\$ 308,779) and Education Delivery (G\$ 1,515,993).
- Total recurrent costs excluding Education Delivery are G\$ 862,766,000. There are 64,4985 students in secondary out of a total of 191,285 students in Nursery, Primary and Secondary – 33.7% of the total.
- The secondary sub sector budget allocation is therefore G\$ 290,752,142. An approximate per student allocation of G\$ 4,508 per student.

(4) *Capital costs (furniture, equipment & buildings)* - Tables 4A and B indicate how the allocation was obtained for these three items: furniture, equipment and buildings using the Central Government Expenditure on Education figures (1999-2000) for the respective regions.

Table 4A: Furniture and equipment

Region	Total allocation (G\$'000)	Secondary share @	Amount per student
6	3,981,000	30% = G\$ 1,194,300	131 (9122 students)
10	1,966,000	32.7% = G\$ 642,882	218 (2943 students)

Table 4B: Buildings

Region	Total allocation (G\$'000)	Secondary share @	Amount per student
6	20,808,000	30% = G\$ 6,242,400	684 (9122 students)
10	1,966,000	32.7% = G\$109,872	37 (2943 students)

(4) *Capital costs (cont.) (books)* - The total allocation for both the development and purchase of classroom textbooks is G\$22,388,402. The total number of exercise books (based on an annual allocation of 15 books per student and 12 books per teacher at a unit cost of G\$ 42) is G\$ 32,476,248. This amounts to an approximate allocation of G\$ 1,107 per student.²

² I am indebted to Lenox Bobb at the MEC for his assistance in the generation of these figures.

1.2.5 Bringing the above assumptions together, here now are the 2 tables summarising Annual Public Expenditure on 2 sample schools:

Table 1A: Breakdown of Annual Public Expenditure for a school of 600 learners from data collected in Region 6

Cost item	Per school	Per student
(1) <u>Human Resources costs</u>		
Administrative staff	8,752,272	14,587
Teaching staff	8,448,000	14,080
Clerical and janitorial staff	771,072	1,285
Librarians and technicians	284,736	475
Cleaners	936,000	1,560
<i>Sub total</i>	<i>19,192,080</i>	<i>31,987</i>
(2) <u>Other recurrent costs</u>		
1. Utilities	183,000	305
2. Supplies		
2.1 Office	196,000	327
2.2 Classroom	294,000	490
2.3 Upkeep/maintenance	214,000	357
3. Exam supervision	164,000	273
4. National events	118,000	197
5. Training (In service)	150,000	250
<i>Sub total</i>	<i>1,319,000</i>	<i>2,198</i>
(3) <u>Overhead Administrative costs</u>		
Regional administration costs	9,951,897	16,586
MEC administrative costs	2,704,800	4,508
<i>Sub total</i>	<i>12,656,697</i>	<i>21,094</i>
(4) <u>Capital costs</u>		
3. Furniture and Equipment	78,555	131
4. Textbooks	664,200	1,107
5. Buildings	410,400	684
<i>Sub total</i>	<i>1,053,155</i>	<i>1,922</i>
Total	34,320,600	57,201

1.2.6 Some interesting findings from the above table:

- Human resource costs comprise 56 percent of the total public expenditure;
- Other recurrent costs comprise only a meagre 4 percent;
- Overhead administrative costs comprise 37 percent, although more appropriately regional administrative costs constituted 78 percent of these total overheads. In 1995 this figure was 55.4 percent;
- Capital costs only comprised 3 percent. This figure is obviously unrealistic in that it does not include the large capital expenditure provided by externally financed projects. However it does marry with the 1995 figure of 9 percent of the budget for capital expenditure being allocated to the regional education departments.

Table 1B: Breakdown of Annual Public Expenditure for a school of 750 learners from data collected in Region 10

<i>Cost item</i>	<i>Per school</i>	<i>Per student</i>
(1) <u>Human Resources costs</u>		
1. Administrative staff	9,516,732	12,689
2. Teaching staff	12,249,660	16,333
3. Clerical and janitorial staff	2,039,616	2,719
4. Librarians and technicians	272,464	363
5. Cleaners and watchmen	1,080,000	1,440
<i>Sub total</i>	<i>25,158,000</i>	<i>33,544</i>
(2) <u>Other recurrent costs</u>		
1. Utilities	329,511	439
2. Supplies		
2.1 Office	103,211	138
2.2 Classroom	635,321	847
2.3 Upkeep/maintenance	748,216	997
3. Exam supervision	202,345	269
4. National events	326,198	435
5. Training (In service)	51,223	68
<i>Sub total</i>	<i>2,396,025</i>	<i>3195</i>
(3) <u>Overhead Administrative Costs</u>		
1. Regional administration costs	29,664,118	39,192
2. MEC administrative costs	3,381,000	4,508
<i>Sub total</i>	<i>33,045,118</i>	<i>43,700</i>
(4) <u>Capital costs</u>		
1. Furniture and Equipment	163,500	218
2. Textbooks	830,250	1,107
3. Buildings	28,000	37
<i>Sub total</i>	<i>1,021,750</i>	<i>1,362</i>
Total	61,350,750	81,801

1.2.7 Some interesting findings from the above table:

- 41 percent of the expenditure is spent at the school level while a larger 53 percent is taken by overhead administration costs;
- A paltry 1.4 percent of the budget is allocated to textbooks;
- 90 percent of the overhead administrative budget is apportioned to the region, a disproportionate allocation between the centre and the region.

1.3 *Public expenditure at the institutional level*

1.3.1 Although the collection of contingency funds is not permitted, it is clear that schools themselves need to obtain additional funding to disbursements allocated from the centre and region. This income is generated primarily from two sources: (i) revenue from sales made by the school, be it from the canteen on a regular basis or as a result of fairs or market days on an *ad hoc* basis; and (ii) funding generated under the auspices of the Parent Teachers Association (and in some cases ex-student associations, including Guyanese who are now abroad but continue to support their school). Table 5 shows the funds generated over a three-year period in a school in Region 6, while Table 6 shows the items of expenditure made by two schools in Region 10 in 2000. The three schools have an average mean population of 500 students.

Table 5: Secondary school generated expenditure over 3 years (in G\$)

Years	Category			Total
	<i>Stationery</i>	<i>General</i>	<i>Travel</i>	
1997-1998	77,759	234,893	74,500	387,152
1998-1999	43,198	1,654,855	54,880	1,752,933
1999-2000	323,569	558,179	86,860	968,608
Average	148,175	815,976	72,080	1,036,231

Table 6: Items of expenditure by 2 secondary schools in Region 10 in 2000 (in G\$)

Item	Amount School 1	Amount School 2
IT and Technical Department	-	100,000
Photocopying and printing	125,605	34,400
Telephone		36,000
Help for the Needy	1,880	5,000
Transportation	46,960	10,000
Speech night prizes	143,698	60,000
Mash		40,000
Sports		50,000
Food		39,375
Total	495,399	378,775

1.3.2 The average per capita spend calculated on an enrolment of 500 students in the school in Region 10 over a three year period is G\$2,072, while the average per capita spend for the two schools in Region 6 is calculated at G\$ 874. This figure, albeit from a small sample, then allows for an estimate of the expenditure on education made by households, community organizations and employers.

1.4 *Private expenditures on secondary education*

1.4.1 In addition to government spending on education sourced through the central and regional channels, there are education expenditures supported by the community through the channels of the institution and, most significantly, direct expenditures made by the families in support of their children's education.

1.4.2 The data provided in Table 7 on Private Annual Expenses on secondary education is gathered from information collected in conversations with parents as well as from data from the Household Income and Expenditure Survey (HIES) conducted by GEAP in May 2000.

Table 7: Private Annual Expenditure on Secondary Education in Reg. 6 & 10.

<i>Category</i>	<i>Basis for cost estimate</i>	<i>Region 6</i>	<i>Region 10</i>
Uniforms	Girl: G\$8000; Boy: G\$12,000 PE: GS1,000	10,000	10,000
Transportation	G\$40-200 range per day x 195 days	15,600	8,775
Lunch/snacks	G\$200 per day x 195 days	39,000	39,000
PTA fees ³	G\$1,000-1,600 per annum	1,000	1,600
Stationery/supplies	G\$10,000-15,000 per annum	15,000	7,500
Field trips/sports	G\$1,000 per term	3,000	3,000
Textbooks ⁴	G415-585 per month	5,000	7,020
	Sub Total⁵ F1-F3	88,600	76,895
Examination fees ⁶	Average of G\$15,000	15,000	15,000
Private tuition ⁷	3-5 subjects ,G\$1,000 per month per subject	48,000	48,000
	Sub Total F4-F5	151,600	139,895

1.4.3 The GEAP sponsored HIES 2000 gathered information on the average monthly income in Regions 6 and 10 from 797 and 556 households respectively. This data is provided in columns 1 and 2 in Table. From this figure the average annual expenditure can be calculated for families with students in Forms 1-3 and Forms 4 and 5.

Table 8: Private education expenditure as a percentage of overall annual household expenditure

<i>Region</i>	<i>Total monthly expenditure</i>	<i>Total annual expenditure</i>	<i>Education expenditure (F1-3) as % of total</i>	<i>Education expenditure (F4-5) as % of total</i>
6	G\$40,386	G\$484,632	G\$88,600=18.3%	G\$151,600=31.3%
10	G\$39,304	G\$471,648	G\$76,895=16.3%	G\$139,895=29.7%

³ PTA fees are paid by approximately 55% of the parents, but this percentage is clearly dropping radically now that the collection of contingency fees is not allowed.

⁴ This monthly figure is taken from the HIES 2000 survey. In informal discussions in the community it appeared that this figure was very low. With six subjects and three books per subject at an average cost of G\$4,000 per book, some families were claiming an outlay of G\$72,000 per annum.

⁵ This sub total provides an indicative estimate of private expenditure for students in Forms 1 through 3. The following sub total provides an estimate of the additional expenditure that is incurred for students that study in Forms 4 and 5.

⁶ This figure is subsidized based on a parent's income and has been averaged here at GS15,000 per annum

⁷ The assumption here is that students enroll in the tuition classes at key years in their schooling.

1.4.4 These figures in Table 8 indicate a considerable increase from the total household spending on education in 1993⁸: in this survey the figure was G\$ 9,421 which represented 3.6 percent of household expenditure and in which uniforms and transportation were the highest cost items.

1.5 *Estimate of total per student expenditure*

1.5.1 Table 9 shows the combined expenditure on education for the 2 regions.

Table 9: Estimate of approximate per student expenditure in secondary education in Regions 6 and 10 (2001)

<i>Category</i>	<i>Region 6</i>	<i>Region 10</i>
Public education expenditure (PEE)	57,201	81,810
Institutional education expenditure (IEE)	2,072	874
Household education expenditure (HEE)	88,600	76,895
Total	147,873	159,579

1.5.2 A crude comparison against which to check the projected estimates for PEE in Table 9 can be made in the following manner: the total education expenditure projections at the secondary level for 2001 are 2,138,617 (G\$ '000). With a secondary population of 49,832 students (excluding the 12,653 students in Primary Tops) this amounts to a per student PEE allocation of G\$ 49,832. The following reasons are given as to why the PEE estimates given in this study for Regions 6 and 10 might be higher:

- The per student overhead administrative costs are too high most particularly because the total number of secondary students excludes students in tertiary and TVET;
- The projected education budget is insufficient to meet the actual demands for 2001;
- Region 10 has a higher proportion of qualified staff in its secondary schools;
- Region 10 has a high education delivery allocation for a smaller population of students.

1.5.3 The average public and private costs per pupil have been used here as an indicator of the resources consumed by education. The figures provided are estimates of a small sample. As such they are a useful indicator, but this unit is not a totally satisfactory unit for measuring production of the system since it does not take note of rates of repetition and attrition. Alternative units of measurement might be the cost of the pupil that has graduated (a measurement of the efficiency of the system) or the class as the unit in order to gain a measurement of the utilization of resources.

1.5.4 The estimate of per-pupil expenditure used in this study does however provide three important benefits:

⁸ HIES conducted by the Bureau of Statistics, Guyana and the World Bank in 1993. See IDB "The Financing of Education in Guyana, Issues and Strategies" (1997), page 13, for further discussion.

- It offers information that can support discussion on significant issues regarding USE;
- It provides a model for estimating the three types of expenditure (PEE, IEE and HEE) that can be utilized in the other eight regions; and
- It outlines assumptions to underpin other models for economic analysis.

1.6 *Significant Factors*

1.6.1 Section 1 now concludes with a brief analysis of some of the significant issues for further discussion.

1.6.2 *Deficiencies in Inputs and Process*

Teacher supply and quality: teaching is a low paying profession in Guyana and the education sector has considerable difficulty in attracting and keeping capable and qualified teachers. This lack of pay is starkly evidenced in Table 2 when the salary of untrained teachers is similar or less than that of the school clerk or laboratory assistant and only slightly more than that of the watchmen.

The high incidence of private tuition: another consequence of low pay is that it exacerbates socio-economic inequities. Table 9 indicates that the additional HEE for students in Forms 4 and 5 is in the range of G\$63,000, of which some G\$48,000 is for private tuition. This figure is an appreciable burden to families and a factor that will surely impact upon equity and access for parents when their children embark upon the full secondary cycle under USE.

Lack of materials: the need for more learning materials is obvious at the secondary level. The current estimate of per student PEE of G\$ 1,107 and the HEE of approximately G\$ 6,000 are clearly insufficient. Indeed, this shortfall corroborates this study's in-the-field findings that families are paying far more for textbooks than evidenced by the HIES 2000 survey in Regions 6 and 10.

1.6.3 *Disparities and Inequities*

Regional inequities: the comparison between Regions 6 and 10 indicates that there are substantial differences in opportunities to learn among the two regions. PEE is some G\$ 24K less in Region 6 than Region 10, while costs borne by the households in Region 6 are some G\$ 12K greater. The differences in PEE are clearly shown in the comparisons in Table 10:

Table 10: A Comparison of Public Education Expenditure between Region 6 and Region 10.

<i>Category</i>	<i>Region 6</i>	<i>Region 10</i>
(1) Human Resources	31,987	33,544
(2) Recurrent costs	2,198	3,195
(3) Overheads	21,094	43,700
(4) Capital costs	1,922	1,362

The most striking difference is in Overheads for Administration, but this gap is not surprising given that Region 6 receives a recurrent budget allocation of G\$504,304 (G\$ '000) for 35,000 students while Region 10 receives an allocation of G\$352,732 (G\$ '000) for only 12,000 students.

Social inequity: Table 9 provides some very significant data pertaining to the issue of cost sharing. In Region 6 the HEE exceeds PEE while in Region 10 PEE just exceeds HEE (unless the child is enrolled in Forms 4 and 5). This data needs to be substantiated by further sampling since it has the following critical policy implications:

- The GOG cannot increase private education expenditure since households are already bearing a substantial, and perhaps overly onerous, burden;
- Such a high rate of household expenditure on education is impacting inequitably on those families that are less able to pay for the private tuition, a full set of textbooks or even to afford transportation costs when schools are not nearby.

1.6.4 *Funding*

Underfunding: the data in Tables 5 and 6 regarding public expenditure at the institutional level (in essence further private revenue generated from the community but disbursed publicly by the school) are also important for the following reasons:

- Quality: the schools are generating revenue according to different means but the amount varies depending upon the ability of the community and the ability of the school management to access funds; and
- Equity: the impact of the drop in revenues from contingency and parental fees is only now beginning to take effect. But it is evident that this public initiative to drop such charges has caused a shortfall in revenue at the institutional level that is being met by an increase in private expenditure rather than by the public purse.

Inappropriate funding: the discrepancy in funding between two of the recurrent items, namely National Events and In-service training, highlights the need for monitoring of the current expenditure. In both regions the sum allocated by the Regions for national events surpassed the amount allocated on in-service training and in the case of Region 10 by a ratio of some 5:1 per student.

Section Two – Projections for USE Expenditure based on Region 6 & 10 Case Studies

2.1 Introduction

2.1.1 The provision of education calls for human and material resources to be expressed in terms of financial resources. Thus different categories of costs were analyzed in Section One in order to provide data on costs within the current education system in two regions. Private costs, current expenditure and capital expenditure were estimated so that an average cost per pupil could be obtained.

2.1.2 In Section Two the task is to offer insights from the GEAP operations in Regions 6 and 10 that can assist the Government of Guyana as it: (i) estimates the cost of implementing USE; and (ii) debates what level of financial resources will be required to attain the agreed educational outcomes. The method of calculation used by the GOG will obviously depend on the type of expenditure, on the defined objectives and the links among the variables. The financial estimate must start with an evaluation of the human and material requirements. These are then translated into monetary terms, by means of available information about costs. Figure 1 shows the chain of operations to be executed:

Figure 1:



2.1.3 Using information from the current GEAP operations in Regions 6 and 10, there are three components to this section:

- Component One – **Design** – A model for costing the design of an “ideal” 800 persons school (using an average estimate of expenditure in Regions 6 and 10);
- Component Two – **Implementation** – A model to support implementation of USE within a region (in this instance, Region 6);
- Component three – **Sustainability** – A model to enable sustainability of capital expenditure after USE has been implemented (using Region 10 as an example).

2.1.4 The purpose of outlining these three models is to present the central GOG/MEC authorities with examples that can be utilized by the other regions as the authorities consider their individual responses to the needs of design, implementation and sustainability under the new policy of USE.

2.2 Component One: *Design*

2.2.1 The educational planners at the centre and the ten regions need to make extensive calculations into teacher requirements, salary costs and construction requirements. For teacher requirements and salary costs, the planners have to make projections of the number of secondary teachers. Calculations may be made by subject, in which case the steps of the estimate are as follows: projection of class size per grade; estimate of the number of classes per grade; projection of class timetables, estimate of the required number of teacher hours and projection of the average teacher working hours.

2.2.2 The methods for estimating construction requirements are not radically different from those used to make projections of teacher requirements. The most frequently used physical unit is the classroom, or sometimes the school. Estimate of the number of classrooms required is shown in the simple figure below:

1. Pupils +
2. Ratio of pupils per class $\Rightarrow$
3. Number of classrooms $\Rightarrow$
4. Number of new classrooms

2.2.3 For the purposes of this ‘design’ component, the example has been used of a model school for 800 students. Table 11 provides the estimates and these estimates are then supported by the assumptions upon which the calculations are based. However, the estimates are indicative and open to further discussion. In Table 12 alternative cost sharing and policy reform suggestions are provided to stimulate the debate.

Table 11: Breakdown of Annual Public Expenditure for an 800 persons “ideal” school from current data collected in Regions 6 and 10

<i>Cost item</i>	<i>Per school</i>	<i>Per student</i>
(1) <u>Human Resources costs</u>		
1. Administrative staff	10,281,192	12,851
2. Teaching staff	13,447,152	16,809
3. Clerical and janitorial staff	1,044,672	1,306
4. Librarians and technicians	2,369,472	2,962
5. Cleaners and watchmen	<u>1,080,000</u>	<u>1,350</u>
<i>Sub total</i>	<i>28,222,400</i>	<i>35,278</i>
(2) <u>Other recurrent costs</u>		
1. Utilities	307,507	384
2. Supplies		
2.1 Office	179,527	224
2.2 Classroom	557,593	697
2.3 Upkeep/maintenance	577,330	722
3. Exam supervision	219,807	275
4. National events	222,099	278
5. Training (In service)	<u>254,400</u>	<u>318</u>
<i>Sub total</i>	<i>2,318,400</i>	<i>2898</i>
(3) <u>Overhead Administrative costs</u>		
1. Regional administration costs	23,426,760	29,283
2. MEC administrative costs	3,786,720	4,733
3. MEC targeted subsidy	<u>2,000,000</u>	<u>2,500</u>
<i>Sub total</i>	<i>29,212,800</i>	<i>36,516</i>
(4) <u>Capital costs</u>		
1. Furniture and Equipment	160,800	201
2. Textbooks	19,200,000	24,000
3. Buildings	<u>332,120</u>	<u>415</u>
<i>Sub total</i>	<i>19,692,800</i>	<i>24,616</i>
Total	79,446,400	99,308

2.2.4 Some interesting findings:

- The total per student public expenditure spend has increased some 42 percent on the average of the two ‘actual’ spends in 2000 (see Tables 1A and 1B);
- 24 percent of the budget allocation goes toward textbook purchase;
- 34 percent of the budget is allocated for overhead administration compared to the average “actual” spends of 45 percent in Regions 6 and 10 in 2000.

2.2.5 Basis of Assumptions for the “ideal” school

(1) *Human Resources* - the salaries of the staff identified below are similar to those outlined in Table 2. Additional positions of IT Technicians and a Bursar have been identified for this school. Points to note include:

- Management staff: the staff would comprise 1 Headteacher, a Deputy Head, 3 Senior
- Masters and 8 Heads of Department;
- The school would have 28 teachers all of whom would be trained and qualified, and four of whom would be graduates;
- The school would have a secretary, bursar/accountant (on a wage of G\$ 22,800) and two janitors;
- There would be the following support staff: a librarian, a laboratory assistant and 3 IT technicians (on a monthly wage of GS 50,000);
- There would be three cleaners and watchmen respectively.

(2) *Other recurrent costs* – costs for Utilities, Supplies and Examinations have been calculated at the average of the expenditure for the ‘actual’ schools in Regions 6 and 10 (i.e. a combination of the estimates provided in Tables 1A and 1B) with an additional 15 percent increase. National Events remain at the same level, while Training has been calculated at the average of the ‘actual’ schools with a 200% increase.

(3) *Overhead Administrative costs* - administrative costs for the respective regional and central governments) have been calculated at the current average with a 5 percent increase. The ‘MEC Targeted Subsidy’ item, however, is an addition – it is based on an annual sum of G\$ 50,000 being provided to subsidize 40 able students enrolled in Forms 4 and 5 who would otherwise leave school due to a lack of funds. The allocation would be based on performance in the Form Three examinations and HIES data that had been corroborated by the school authorities.

(4) *Capital costs* - figures for Furniture, Equipment & Buildings are based on an average of the current estimates in Tables 1A and 1B with an increase of 15 percent. Figures for textbooks are based on the state providing 50 percent toward the cost of a per student textbook allocation of 6 subjects x 2 texts @ G\$ 4,000 per textbook

2.2.6 The estimate for the annual cost of a 800 persons ‘ideal’ school in Table 12 has some new additions from the current model outlined in Tables 1A and 1B (viz. the textbook allocation, a targeted subsidy and the positions of IT technician and bursar). But essentially the estimate is based on the existing unit cost assumptions and the estimate does not entail any related policy reforms. However, when designing the costs for USE, planners should be mindful of possible variations that could be utilized. Table 12 offers some examples which illustrate the options available.

Table 12: Possible unit costs basis and related policy reforms per month

Cost basis	Central / regional government	Government via school	Parent-student	Expenditure related policy reforms
<i>Teaching salaries</i>	100%			Aim for 35:1 STR across all schools where feasible
<i>Instructional materials</i>		75% of value of teaching materials	Textbook rental fee and 25% of value of teaching materials	A basic set of teaching materials for every teacher; access to 1 textbooks per subject per pupil in all schools
<i>Learning materials</i>		School having grant allocation to support needy students according to set criteria	100%	
<i>Quality assurance</i>	Salaries of inspectors; costs of school visits		Possibility of establishing training for parents/comm unity to inspect schools	Minimum of 1 advisory visit per school per year
<i>School administration, maintenance /utilities</i>	25% of share	75% as per capita grant		The support staff:school ratio to increase in double shift schools; for admin./ utilities, all schools to receive the same amount per student; maintenance equivalent to 3% of building cost every 5 years
<i>Central / regional administration</i>	100%			There will not be a fall in administration costs with decentralization and other efficiency gains given the increase in the student population.
<i>Examinations</i>	50%		50%	
<i>Targeted subsidy</i>		100%		Bursary scheme to be targeted at 25% of the students enrolled in Forms 4 and 5 who are socio-economically disadvantaged

2.3 Component Two – Implementation

2.3.1 Having studied the requirements in human and material resources, and confirmed that the necessary technical capacity for the execution of the USE development plan is available, the impact of the new plan on public sector finance must be assessed. There is a need for a comparative analysis between the financial requirements of the plan and the means available to match those requirements. The recent World Bank Note⁹ posits three scenarios in which the number of secondary schools increases by 49:53:55 depending upon the scenario chosen. Although the construction or rehabilitation of such a large number of schools is laudable, the impacts on capital expenditure in the immediate term will be severe.

2.3.2 In this component the impact of USE on Region 6 is used as a Case Study which can inform similar studies in other regions. Each region will have a different set of challenges and thus need to develop its own plan for implementation. If the present SSEE filter is removed, it is calculated that the secondary student population in the region would double to approximately 18,000 students. How can the system manage this doubling in population utilizing the existing infrastructure? One option pursued here is that the region might adopt a double shift system. The advantages and disadvantages for such a system are detailed in Table 13 .

Table 13: Advantages and disadvantages of the double shift system

<i>Issues</i>	<i>Advantages</i>	<i>Disadvantages</i>
<i>Infrastructure</i>	• Cost savings from double utilization of infrastructure • A solution that is commonly utilized elsewhere on an international basis	• Parental and teacher resistance • Wear and tear on the facilities • Ability to offer ECAs is curtailed
<i>Human resources</i>	• Cost savings from maximizing human resources • Savings that can be shifted to offer more training and financial incentives to teachers • “Golden hour” incentive would encourage teachers to become trained	• Additional workload on teachers • Difficulties of timetabling/administration • Problem of parents at home • Teachers would be unable to carry out their other ‘earning’ activities

2.3.3 Before introducing the projection of infrastructure and human resource needs under the double shift system in Table 14, it is necessary to outline the following indicative assumptions:

- This quantitative USE development plan must involve, in parallel, a building programme, a teacher-hiring and teacher-training programme as well as a school equipment programme;

⁹ World Bank. June 26th 2001. *Fiscal implications on the Proposed Universal Secondary Education in Guyana*. A Note. Page

- Region 6 has seventeen schools (10 'A', 6 'B' and 1 'C' type school¹⁰). It is assumed that thirteen of these schools, including the new DfID funded school will be 'A' type schools that operate under the following staff/period allocation:

Table 14: Projection of staff and period allocation under the 'double shift' system

<i>Staff</i>	<i>Number</i>	<i>Periods</i>
Head teacher	1	8
Deputy Headteacher	2	24
Senior Master/Mistress	4	96
Head of Department	6	144
Teachers	26	828
Total	39	1200

- trained teachers are encouraged to work the 'golden hour', in addition to their current 40 period week of which 32 periods are supposedly classified as 'class time';
- the time table would have two shifts running from 7.30 am to 5.30 pm;
- a community decision would be taken as to the system that would be used for morning and afternoon shift allocation: i.e. whether Forms 4 and 5 were in the morning and Forms 1-3 in the afternoon or whether there were two schools which incorporated Forms 1-5 and the shifts alternated on an agreed basis.

2.3.4 Table 15 now projects the implications of such a plan followed by a few further details regarding the assumptions.

Table 15: Projection of Infrastructure and Human Resource Needs under USE in Region 6 using the double shift option.

<i>Year</i>	<i>Student population</i>	<i>Human resources</i>				<i>Infrastructure (# of schools)</i>
		<i>Administration</i>	<i>Trained</i>	<i>Untrained</i>	<i>Total staff</i>	
2001	9184	196	131	192	507	17
2005	17,933	232	251	167	650	18

2.3.5 Given this projection of needs, it is possible to generate an estimate of the indicative costs for implementation of the double shift system in Region 6 commencing in 2005. Table 16 offers this estimate followed by some assumptions that underpin the figures.

¹⁰ Four schools will not 'double up', namely Blackbush, Winifred Gaskin, Academy and Manchester.

Table 16: Public education expenditure in Region 6 under a system of USE (in G\$ '000)

<i>Cost item</i>	<i>Indicative amount</i>
(1) Salary recurrent costs	30859
(2) Non salary recurrent costs	189,557
(3) Capital expenditure	30986
Total	251,402

2.3.6 Assumptions

(1) *Human resources* - Table 17 indicates the staffing requirements under the proposed system

Table 17: staffing requirements and salary implications (in G\$ '000)

<i>Position</i>	<i>Number</i>	<i>Cost</i>
Headteacher	18	1,521
Deputy Head	55	3,933
Senior master/mistress	58	3,695
Head of Department	102	6,498
Trained teacher	251*	9,055
Untrained teacher	167	3,352
Total	650	28,054**

* The current ratio of trained to untrained in the region is 40:60 – the USE plan here would reverse these ratios;

**These salary figures are based on current wage rates. This figure has been increased by 10% for the year 2005.

(2) *Non-salary recurrent costs* - these costs have been calculated using the World Bank's Note (page 9, Table 4 - Medium Case Scenario) and the following formula: if total non salary recurrent expenditure for a total national enrolment of 101,165 students in 2004-2005 is estimated at G\$ 1,069,343,000 then enrolment of 17,933 students in Region 6 costs G\$ 189,557,000.

(3) *Capital costs* - there are no additional school buildings required under the plan, but there is an assumption that there will be a need for extensive refurbishment, construction of science and IT laboratories and the purchase of additional furniture. A study would be required to itemize and cost such requirements in detail; however, for the purposes of this computation the capital expenditure for Region 6 in 1999-2000 has been taken and increased by 50 percent.

2.4 Component Three – *Sustainability*

2.4.1 Components One and Two provide an introductory response to support planners as they respond to an indicative mandate from the Ministry such as the hypothetical example outlined in Appendix One. Component Three deals with the feasibility of the policy's implementation from the point of view of consistency between the objectives and planned actions, their implementation schedule and now their ongoing sustainability.

2.4.2 Even after strategies to improve the efficiency of the system are agreed, (e.g. raising the STR, amalgamating secondary departments of primary schools and instituting a textbook recovery mechanism)¹¹, additional resources from outside the government budget may well be needed using innovative interventions to attract private resources. Consideration of financing for the rollout to USE would be incomplete without discussion of the role of private education¹². While this last component presents a brief introduction to this topic, it is recommended that the GOG/MEC conduct an in-depth study to (i) assess the quality and extent of the current provision of private education and (ii) generate options regarding the regulatory framework, incentives and alternative funding modalities that might support private education for public purposes.

A Possible Role for the Private Sector

2.4.3 There are several ways in which the private sector can participate in the education sector in Guyana. These include the “traditional” form of private participation – namely the delivery of education services through privately owned schools and higher education institutions- which is starting to become more prominent.¹³

2.4.4 But there are a number of other ways that the private sector might participate in the sector. These include:

- Private sector management and operation of publicly owned schools under contract to the state (i.e., so-called contract schools);
- Catering, cleaning, security and recruitment;
- Providing scholarships or vouchers, whether publicly or privately financed, for students to attend private schools; and
- Providing inputs into the educational process, including curriculum materials and educational building infrastructure such as school buildings.

¹¹ See World Bank. The Note (page 12)

¹² The definition of private education used here is as follows: “All formal schools that are not public, and founded, owned, managed and financed by actors other than the state, even in cases when the state provides most funding and has a considerable control over these schools.”

¹³ There were 31,912 private candidates for the CPC examinations in 2000, a significant increase on previous years according to the Examinations Department, MEC.

2.4.5 Table 18 provides a summary of the four different types.

Table 18: Summary of Private Participation in Education

<i>Mechanism</i>	<i>Private Sector Involvement</i>
Delivery of Education by Private Providers	Private schools and higher education institutions Tutorial colleges Education internet portals Private tutoring services
Private Operation of Public Schools	Public schools operated by private firms or organizations under contract to a public agency
Private Sector Supply of Inputs into Education Process	Supply textbooks, curriculum and other learning materials to public and private schools Build and operate educational infrastructure such as student hostels Supply associated services to schools and higher education institutions, such as school review and inspection, health care services and canteen services
Education Vouchers and Scholarships	Governments or private sector individuals/organizations provide vouchers or scholarships to students to attend private schools.

2.4.6 The most common avenue for private participation in education is through delivery by private providers. These can include "formal" private schools and higher education institutions, eg. tutorial colleges that prepare students for national exams, the supply of individual tutoring services or the provision of tuition through education internet portals, and training colleges (e.g., secretarial, languages and computer learning).

2.4.7 Private sector involvement, however, can go well beyond this traditional mode. One area of increasing participation is for private organizations to operate *public* schools under a management contract with the local school board. These schools remain *publicly* owned and *publicly* funded, but are managed by a *private* sector operator in return for a management fee. As part of the contract, the firm or organization is generally required to meet specific benchmarks in areas such as school attendance, student performance and community involvement.

2.4.8 Vouchers or scholarships are another way in which the private sector can participate in the education sector. This participation can be either direct or indirect. Generally speaking, vouchers are payments that a public entity gives directly to students that may be redeemed to help offset all or part of the cost of tuition at a school of their choice. Vouchers come in a variety of forms. They may cover the full cost of tuition at a school or they may cover only a part - with students paying the rest. The voucher may be limited to covering all or part of tuition fees only or they may also cover other costs such as transportation, uniforms, books, etc. Vouchers may be made available to all students or they may be targeted toward specific groups. In most cases, vouchers are not paid directly to students. Rather, parents are given the freedom to choose the school and the school receives funding in accordance with the number of enrolments.

2.4.9 Table 19, 'a summary of WB education projects', highlights the array of different demand-side financing options that are available to the government, such as stipends, community financing, targeted bursaries, vouchers, student loans, community grants, and public assistance to private schools.

Table 19: Voucher and Voucher-like Schemes in Developing countries

<i>Country</i>	<i>Mechanism</i>
Bangladesh	Stipends for girls to attend public or private schools
Belize	Government partnerships with churches to share costs
Bolivia	Private management (church-based organization) of public schools
Brazil	Matching grants, capitation grants, scholarships for poor students
Botswana	Matching-grant schemes
Chad	Community financing
Chile	Voucher system for poor students, capitation grants for all students
China	Matching-grant schemes, targeted bursary for poor and minority children
Colombia	Targeted voucher system
Côte d'Ivoire	Government sponsorship of students at private institutions
Dominican Republic	Assistance to private schools serving low-income students
El Salvador	School choice for poor
Gambia	Targeted scholarships, capitation grants for all students
Guatemala	Targeted stipends for girls in 13 communities
Ghana	Matching-grant schemes
India	Matching-grant schemes and numerous incentives
Indonesia	Targeted scholarships for junior secondary school students
Jamaica	Student loans
Kenya	Voucher for informal sector workers for short-term skill upgrading courses
Lesotho	Government partnership with churches to share costs
Mauritius	Matching-grant schemes
Mexico	Targeted bursary for poor and indigenous populations
Myanmar	Community-sponsored schools
Morocco	Scholarships for rural girls
Mozambique	Scholarships for rural girls
Pakistan	Community scholarships, subsidies to private schools serving rural girls
Senegal	Scholarships for students to attend private and public schools in Dakar
Tanzania	Matching-grant schemes, targeted bursaries for secondary school girls
Thailand	Bicycles for poor students in rural areas
Zimbabwe	Per capita grants

Source: Patrinos (2000) ¹⁴

¹⁴ Patrinos, HA (2000), Decentralization of Education: Demand Side Financing. The World Bank. Washington DC

A Possible Partnership for USE

2.4.10 USE envisages the construction and support of IT laboratories within the secondary schools. Ongoing maintenance and replacement of the hardware for these laboratories shall be a significant burden on the recurrent budget. The intervention proposed here addresses this issue through using public-private partnership to generate income in support of the IT Labs. A pilot study is outlined that could be trialled in Region 10. In this study it is proposed that the IT laboratories that are established in the secondary schools could be outsourced to private providers at times when the school is not operating.¹⁵

2.4.11 Tables 20A and B define some of the assumptions that underpin the pilot. Further, they show that the income generated would surpass expenditure per month for one laboratory at the rate of G\$ 341,660 - a sum that in turn can cover maintenance with a surplus to be set aside for replacement every five years.

Tables 20A and 20B: Income and Expenditure for an outsourced IT Laboratory in Region 10¹⁶

Income for each laboratory (G\$)		
Assumptions	Length of course (hours)	24
	Length of session (Hours)	3
	Students per course	14
Variables	Course per week	1
	Frequency per week	2
	Course fee per person	70,000
	Cost of trainer per hour	20,000
Calculated	Length of course (Weeks)	4
	IT training per week (Hours)	6
	IT training per month (Hours)	26
Course per year		13
Courses per month		1.08
Income per course		980,000
Income per year		12,740,000
Income per month		1,061,660

Expenditure per month (G\$)		
Assumptions	Ink and paper	80,000
	Breakages	20,000
Variables	Maintenance contract	100,000
Calculated	Consumables and maintenance	200,000
	IT trainer/s	520,000
Total expenditure per month		720,000
Profit	Profit per month	341,660
	Profit per year	4,100,000

¹⁵ By 2005 it is planned that Region 10 shall have five IT laboratories

¹⁶ I am indebted to Stephen Wilkinson with whom this idea and costing would not have been possible.

Section Three - Summary

“If you think education is expensive, try ignorance”

3.1 Introduction

3.1.1 This final section provides a brief summary of the main factors impacting upon the financing of secondary education as a result of the analysis of supply and demand side cost estimates generated from data collected in Regions 6 and 10 and explained in Sections 1 & 2 of the report above.

3.1.2 The summary does not present findings or recommendations in the traditional sense – this is not the objective of the report. The information presented in the body of the report, along with the templates given in Appendix I, provide (a) food for thought for GOG / MoE officials involved in planning the implementation of USE ; and (b) a number of bases (ie. the templates themselves) which can be used to identify and record the data necessary to underpin decision making in the area of USE.

3.1.3 Some of the figures / statistics contained in the various tables in the report may need correcting or amending – this does not detract from the value of the tables as indications of the kinds of information and cost breakdown which MoE planners will need to have access to as a basis for making decisions on USE implementation.

3.2 Quality, Equity, Access & Funding issues

3.2.1 A whole raft of measures is needed for GOG to improve the quality of education for Guyanese learners. These measures include increased instructional time (reducing student and teacher absenteeism), teacher training, improved provision of textbooks, provision of adequate facilities and rehabilitation of school infrastructure, increased parental and community involvement in school, improved school management etc.

3.2.2 At the macro level, the GOG has been addressing many of these issues, eg. through increasing the percentage share of the government budgetary allocation to education, rising from 3 percent in 1991 to 14.7 percent in 2000. And, while the WB Note¹⁷ cautions that the GOG would need to increase its allocation to the MEC in order to meet the demands for improving the education system and achieving USE, the document also provides scenarios that show that such support can be obtained.

3.2.3 At the micro level, through its innovative Education Access Fund, GEAP has been addressing some of the causes of absenteeism in Regions 6 and 10. To date this fund has disbursed G\$ 6,032K on a diverse range of projects (see www.geap.org.gy and Appendix III). The fund provides support for locally designed mini projects from schools, community groups and Community Business Organizations. Monitoring and evaluation of the outcomes will only be completed towards the end of the project, ie. late 2003. From the analysis provided at that time, a decision can be made as to whether a similar funding facility would be appropriate on a national basis in 2005.

¹⁷ Ibid, page 12

3.2.4 Cost sharing in itself is inequitable as, economically speaking, parents do not have the same starting point. Therefore a cost-sharing scheme cannot be implemented without the introduction of a bursary/scholarship scheme that is targeted at the socially and economically disadvantaged. This study has included an allocation of a targeted subsidy for students enrolled in Forms 4 and 5 (see Component One MEC targeted subsidy).

3.2.5 Additional alternative sources of finance are expected from parents to supplement the proposed increased efficient use of government allocations, but these parents are already spending considerable portions of their income on education. This study has estimated that this burden is possibly in the range of household expenditure in Regions 6 (18-31 percent) and 10 (16-29 percent).

3.2.6 If cost sharing is to be introduced, then it must be seen within the overall context of the EDSP and PRSP processes. If parents/students are to be required to pay for services they have the right both to know how such funds are expended and to have a say in how their share of the cost is arrived at. This study has produced an approximate estimate of the household burden in two regions, but an estimate of these costs in other regions needs to be generated, with a tabulated record maintained on a regular basis once USE is introduced.

3.3 *MEC response*

Marketing and ownership

3.3.1 Opposition of social groups involved in USE can compromise the achievement of policy objectives. Parents, students, teachers and their trade unions are agents of the education system. Their individual and collective behaviour will be a determining factor for the achievement of USE objectives. Essentially the decision to continue studying at school beyond Form Three is an individual family decision.

3.3.2 The MEC will need to anticipate such reactions, assess their strength, and seek to avoid or attenuate them through negotiation, explanation and communication. It is rare that the problems are only quantitative, and the way the plan's objectives are presented is extremely important for their acceptance by the social groups concerned. The demand side unit costs for Households (Section One) and teacher trainers (Appendix Two) provide assistance through generating an approximate estimate of the impact for these stakeholders.

Data collection

“Think systemically but act locally”

3.3.3 The collection of data for this report and then its disaggregation was a difficult experience on a number of levels: (i) *Subsectoral*: disaggregation of actual secondary costs was complicated by the amalgamation of the Primary TOPs items within the Secondary budget; (ii) *Regional*: it was difficult to extrapolate costs for items that were costed to the Regional education departments and then onto the individual school; and (iii) *Institutional*: the individual institutions did not have a current record of revenue and expenditure that could be compared across institutions.

3.3.4 Establishing a common template for gathering data of current and projected costs of USE (at the different levels -central, regional and institutional) will be of significant benefit to the educational planners. Furthermore, the exercise of generating this data should be supported for its own sake as a useful capacity building tool. The process of identifying and analysing the data provides an excellent opportunity for training officials and developing institutional capacity in preparation for USE.

Public private partnership

“A basic assumption is the need for negotiated policy and participatory planning”

3.3.5 The GOG needs to review the Education Act with the aim of accommodating cost sharing and private initiatives with regard to educational provision at all levels of the education system. A policy environment is required that can encourage the participation of non-state actors in the provision of secondary education. To that end, what government regulations should be enacted to develop, support and indeed possibly finance the private education sector (e.g. subsidies, tax exemptions, concessionary leases and vouchers)? And, at the same time, what systems and performance indicators are appropriate that can enable the government to monitor the private sector in terms of quality and access (i.e. according to such variables as population coverage, access, equity and the quality of learning and teaching environment)?

3.4 Towards a conclusion

The School I'd Like:

*“We will no longer be treated as herds of identical animals
waiting to be civilized before we are let loose on the world.
It will be recognized that it is our world too.”*

[Entrant in children's competition to describe their ideal school]

3.4.1 Studies into finance needs for USE, whether in this report or in the WB's Note on the fiscal implications, are traditionally focussed on inputs – estimating the financial amount from the total human and material resources that are needed. A much harder task is to determine some estimate of the outputs, ie. the return on the investment in education. Is it the number of CXC passes? Is it the number of people who find employment in the workplace? The reality is that a lot remains to be learned about how secondary schooling fits into a country context, as opposed to how policy makers claim it fits. What observable results and outcomes stem from investments in secondary education? The danger is always to shift the focus from 'learning' to 'schooling'.

The only given fact that is guaranteed is that the facts provided in this report are not the exact facts!

3.4.2 Finally, it should be reiterated that the data provided is based on a brief visit (11-21 June 2001) and, consequently, only a small sampling. The important aspect of the report, however, is the process that it hopefully stimulates with regard: (i) to encouraging further discussion of these facts among the diverse stakeholders involved; and (ii) to supporting the exercise of generating similar data from the other eight regions within the tight timeframe allocated for the MEC in its preparation for USE.

3.4.3 The recent World Bank document "A Note" (June 6th 2001) and the in-depth analysis of the financing of education system being carried out under the auspices of SSRP have certainly assisted in setting the macroeconomic context. The practical function of this report is to offer some cost estimates and experiences from the GEAP activities in Regions 6 and 10 that are of use to the MEC senior managers as they continue in their collaborative work with the different regions in planning for USE.

Appendix I

Appendix I provides an indicative template for generation of the USE Plan. The contents of this template could be utilized in a workshop setting by the national USE Task force to generate data from the ten separate regional education departments.

Universal Secondary Education Development Plan 2001

The Minister of Education and Culture has decided to implement a plan for the development of universal secondary education. The plan's objectives up to the year 2010 are as follows:

1. Extension of access to secondary education for all thirteen year olds;
2. A fifty percent reduction in drop-out and repetition rates;
3. To facilitate management of the system, the Ministry encourages exploration of the double-shift and multi-grade systems;
4. Assumption that the ideal average class size shall be 35 pupils;
5. Improvement in the management and the allocation of teachers so that each teacher will have charge of 32 working class periods;
6. A 30% increase in teachers' salaries will be applied progressively between 2001 and 2010;
7. Each pupil will receive one textbook per subject from the Ministry each year. This measure will be applied progressively over the period 2001-2010.

Statistical data on secondary education since 1998 as well as the enrolment projections prepared by the Planning Division of the Ministry of Education are given in the following tables:

Table 1: *Demographic data*: Population by year of age with actual data (1998-2001), estimations (2002-2003) and projections (2004-2010)

Table 2: *Admission rate in Grade 8*: Ratio new entrants/population aged 13 with actual data, estimations and projections 1998-2010

Table 3: *Promotion rates (%)*: Forms 1-5 with actual data, estimations and projections (1998-2010)

Table 4: *Repetition rates (%)*: Forms 1-5 with actual data, estimations and projections (1998-2010)

Table 5: *Drop-out rates (%)*: Forms 1-5 with actual data, estimations and projections (1998-2010)

Table 6: *Evolution of enrolment*: Forms 1-5 with actual data, estimations and projections (1998-2010).

The actions to be undertaken within the framework of the plan must start in the 2005 school year; however early implementation of the plan is to be encouraged. Submission of the estimates of the requirements for the implementation of each Region's plan (according to the following six criteria outlined below) must be submitted by October 2001.

1. *Teacher requirements*

- How many teachers will be required annually to cover the needs of the projected enrolment of pupils?
- Based on 2001 costs, what will salary expenditures are in each annual budget, taking into account the planned increases in teachers' salaries? In 2000, the average annual salary of a trained teacher is 435,000 Guyanese dollars. The plan provides for 10 annual increases of 3 percent.

2. *New teacher requirements*

- For each year of the period 2001-2010, how many new teachers will be needed in the different subjects?
- The Ministry assumes the attrition rate of teachers (for retirement and other reasons) to be 2.5 per cent per year.

3. *Construction requirements*

- How many new classrooms will have to be built for each year of the plan?
- What will be the expenditure for each annual budget, at 2001 price? The construction cost for each new classroom is ??? Guyanese dollars in 2001.

4. *Schoolbook requirements*

- How many schoolbooks (text and exercise books) will have to be produced each year? What will be the expenditure for each annual budget? At current prices one textbook costs an average of G\$ 4,000 and an exercise books costs an average of G\$.

5. *Budget costs for the MEC*

- What will be the total expenditure for each annual budget, taking into account the cost of teachers' salaries, new constructions and schoolbooks, as well as average annual overhead and maintenance costs of G\$ 32,397¹⁸ per secondary student enrolled in 2001?

(Assume that the following average annual growth rate applies between the Years 2001-2005: 2001: 60,000; 2002: 68,342; 2003: 77845; 2004:88669; 2005: 101,000).

¹⁸ This figure is calculated from the average found in Tables 1A and 1B for Regions 6 and 10

Appendix Two

The School I'd Like

The most unusual thing about my school is the teachers. They never go off sick, so we never have supply teachers who can't remember our names."

Extract from a competition for students into their ideal school

The WB note posits the need for a total of 4,9762 secondary teachers in 2005, up from the current total of 3,175. From the supply side, with a STR of 27:1, it is proposed that the MEC could provide in-service training and increase the ratio of trained teachers to students by 73 percent by 2005.¹⁹ The USE Finance Study tried to capture some indication of the demand side costs that are presently incurred by teachers enrolled on the CPCE in-service programmes. Table 21 shows some of the costs derived from conversations with the Principals and trainees at the Rose Hall and Linden Centres. These are approximate costs taken from a small sample but the extent of the amount spent stresses the need for further investigation of the hardship incurred by those enrolled; and, more significantly, begs the question whether certain teachers shall require subsidies in addition to their salaries in order to be able to enroll.

Table 21: Demand side costs incurred by Teacher Trainees in two Centres (in G\$)

Category	Region 6 (cost per annum)	Region 10 (cost per annum)
Transportation	16,000	100 x 4 days x 39 weeks=15,500
Photocopying	2,500	2,500
Stationery/supplies	2000 per month=18,000	7,500
Food/refreshments	200 per month=18,000	200 x 4 x 39 weeks=31,000
Textbook purchase	500 per month=4,500	Varies on subjects taken: 2000-8000 per annum=average 5000 pa
Assignment production	500 per month=4,500	4,000
Indicative total	63,500	345,500

Two other costs were mentioned in the discussions but are omitted here: (i) domestic costs of hiring a babysitter while the parent was on the programme (G\$6,000 per month); and (ii) the opportunity costs that were incurred as a result of studying rather than earning. This latter cost has been omitted since putting a monetary figure on the opportunity cost would be artificial and would require many assumptions. Nevertheless, it is clear that opportunity cost will be a factor in enrolment in any teacher training programmes.

¹⁹ See World Bank. The Note (page 15)

Appendix Three

Table 22 provides a summary of spending, both current and to be disbursed, under GEAP's Education Access Fund. While the table is useful in providing insight into the areas for which the communities are requesting funds, it is important to stress that the Project is also impacting on access through activities for which the beneficiaries are not interested in obtaining funds. (I.e. the GEAP staff are working with the communities on activities that support access but for which there is no funding allocation required).

Table 22: A Summary of GEAP Education Access Fund disbursement (G\$ '000)

<i>Region</i>	<i>Community library</i>	<i>Literacy</i>		<i>Food program</i>	<i>Uniform production</i>	<i>Recreation facilities</i>	<i>Skills training</i>	<i>Day Care</i>
		<i>Adult</i>	<i>Child</i>					
A6	450				430		700	
A10		477	544		190	250		
B6	250			750		250	250	250
B10	250	141	250		250		250	
Total	950	618	894	750	870	500	1200	250

A6 and 10 refer to sums that have been disbursed while B6 and 10 are sums that are approved and due to be disbursed. The total allocation of G\$ 6,032K has been disbursed over a total of 26 projects - twelve in Region 10 and fourteen in Region 6.