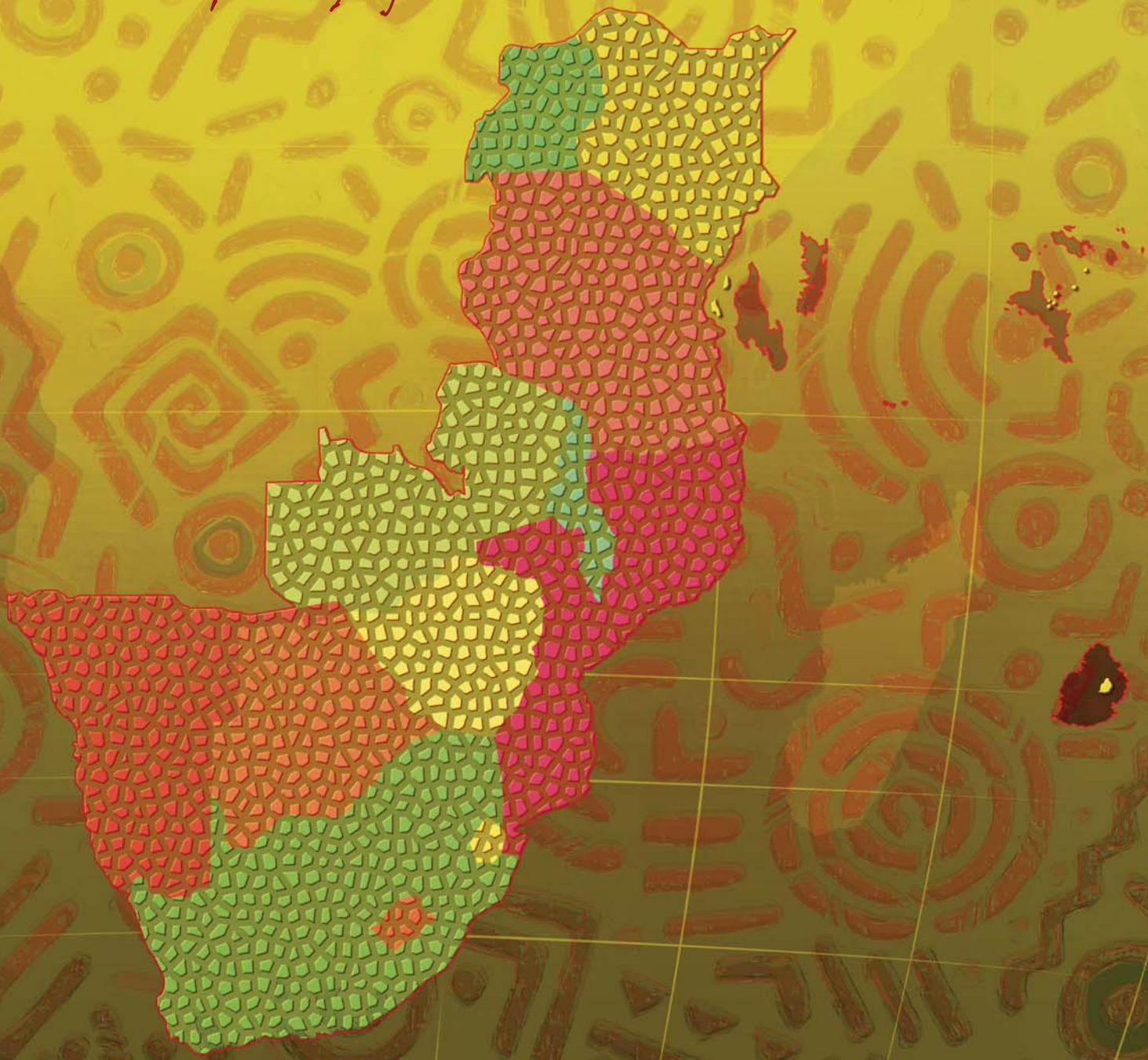
The SACMEQ III project in

SEYCHELLES

A study of the conditions of schooling and the quality of education



SACMEQ

Southern and Eastern Africa Consortium for Monitoring Educational Quality

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ACRONYM

ERAP	Education Reform Action Plan
SACMEQ	Southern Africa Consortium for Monitoring Educational Quality
IPAM	Improve Pupil Achievement in Mathematics
SIALS	Seychelles Integrated Adult Literacy Survey
SES	Socio-economic Status
MoE	Ministry of Education
CCATS	Centre for Curriculum Assessment and Teacher Support
MWG	Mathematics Working Group
GAT	Gender Action Team
UNGASS	United Nations General Assembly
HAKT	HIV-AIDS Knowledge Test
PSE	Personal and Social Education

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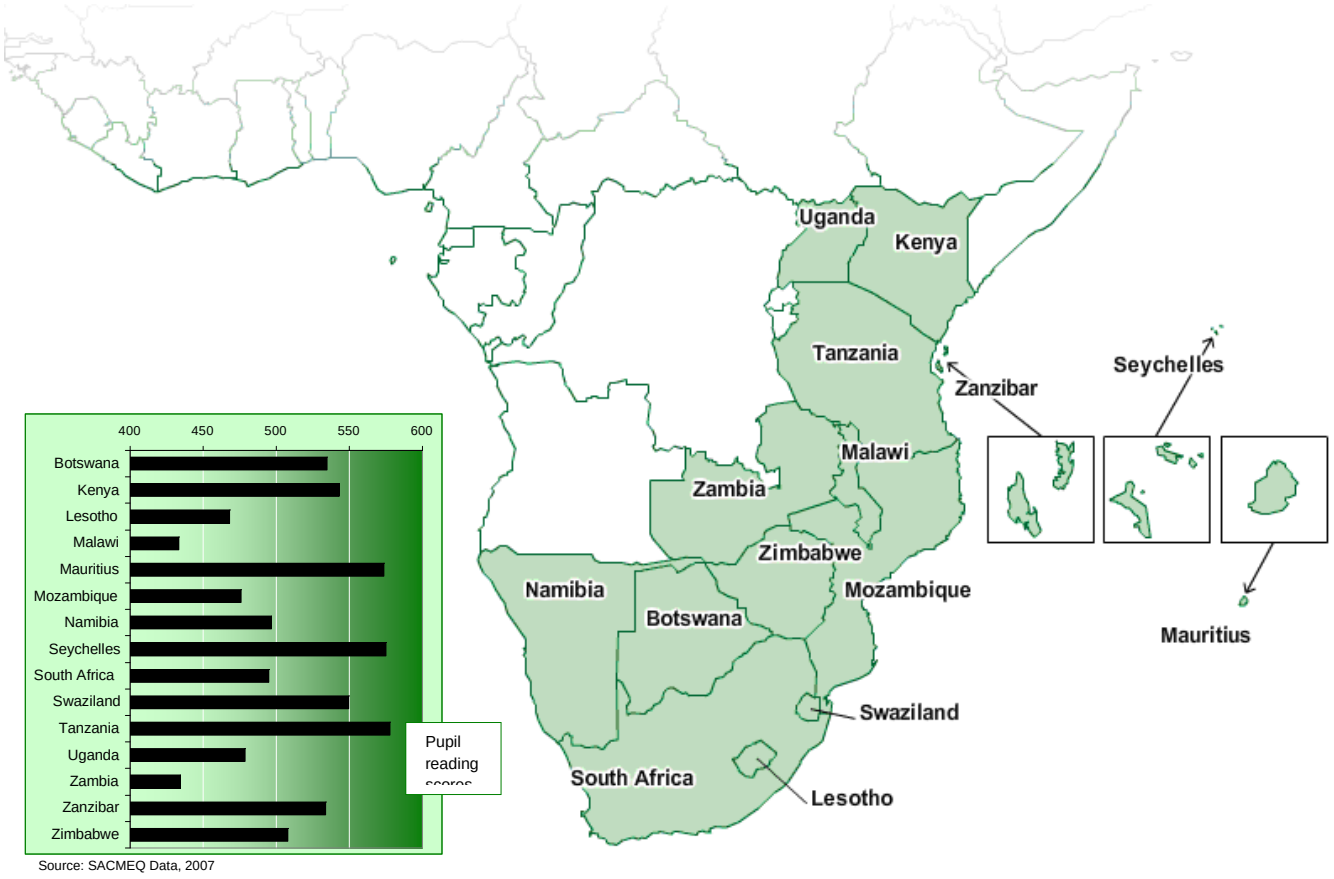

The Fifteen SACMEQ School Systems

Chapter 1
Setting of the study

1.1 Introduction

The Republic of Seychelles is a small island state, situated four degrees south of the equator, in the western Indian Ocean. It consists of a group of islands, both granitic and coralline, with a total land mass of 453 square kilometers. Mahé, the main island, accounts for 35 percent of the main land mass. Praslin and La Digue are two other principal islands within a 40 kilometre radius. The islands of Seychelles are located about 1,600 kilometres from the coast of East Africa.

It is not only in terms of land area that Seychelles is considered to be a small state but also in terms of its population. Seychelles has a population of 87, 298 (National Bureau of Statistics, 2010) concentrated on Mahé. Eighty-eight percent of the population lives on Mahé. Another 10 percent live on the two other islands, Praslin and La Digue, while the remaining two percent are scattered over the other islands. On Mahé, 40 percent of the population is located between Victoria, the capital, and the Seychelles International Airport, a belt of seven square kilometers. This is an area in which most of the administrative and industrial activities take place.

Seychelles has the characteristics of an island state. However, it is cut off from the African continent, by the Indian Ocean, it has a limited population and is located far from the trade and financial centres of the international economic system. This insularity and isolation has influenced the socio-economic setting of the country. Just the same, Seychelles has developed a multiracial society with Christianity as the dominant religion (although other religious organizations are developing) and Creole as the mother tongue with English, French as the other two national languages. Although there are on-going attempts at diversification - such as fishing, small-scale manufacturing, the development of farming - Seychelles depends on tourism as the main economic sector.

1.2 The Education System

Education in Seychelles is comprehensive, co-educational, and free of charge to all Seychellois children for a period of 13 years (from Crèche to Secondary). Moreover, a system of further and higher education is available free of charge to all Seychellois students who meet the selection criteria appropriate to a particular course of study or training for which the student applies. The majority of the school population is concentrated on Mahé (88 percent) with 8 percent on Praslin and 4 percent on La Digue. However, children have to live on Mahé to benefit from secondary education and further and higher education.

All children between the age of 5/½ and 15 must attend school. The Education Act 1983 made provision for nine years of compulsory schooling. This was extended to ten years in 1991. The Ministry of Education operates six years of primary (P1 to P6) and five years of secondary schooling (S1 to S5). The population of each year group remains fairly stable at around 1,500 in each year of primary/secondary schooling. This does not include the 7 percent of school children who attend private primary or secondary schools.

(a) Pre-primary (crèche) education

Although crèche education is optional, over 99 percent of children aged between 3½ and 5½ years attend crèches. Crèche classes are attached or adjacent to district primary schools, and are administered by primary school heads. In recent years, there has been proliferation of nursery schools, better known as day-care centres. These are privately-owned and increasingly children are moving on to crèche from these day-care centres.

(b) Primary Education

Primary education comprises of six year compulsory schooling. Of the 24 primary schools, one is situated on La Digue, two on Praslin, and the rest on Mahé. These schools vary in size with only one class per year group in the smallest school and six in the largest school. However, the average school consists of about three classes per year group. Progression through the primary school is automatic with a national examination at the end of the 6 years of primary education. At State level children attend primary education in their district.

(c) Secondary Education

Secondary education is delivered in regional secondary schools. Instead of students remaining in their district where they attended primary schools, they are concentrated into fewer regional centres. Secondary education is compulsory in the first four years of schooling and optional in the fifth year. All pupils from the primary schools enter the secondary school at S1. Secondary education caters for children aged 11/12 years to 15/16 years.

(d) Post-Secondary education and training

Full-time post-secondary education is provided in a number of institutions. These are principally the Industrial Training Centre, Farmers Training Centre, Maritime Training Centre, Business Training Centre, National College of the Arts, Seychelles Hospitality and Tourism Training Centre, National Institute of Health and Social Studies. The first four institutions are under the responsibility of the Ministry of Education whilst the others operate under the auspices of associate Ministries.

(e) Higher Education and Training

The Seychelles University was set up in 2010 and is undergoing a process of further development. At the moment, the University is offering a limited number of degree programmes in Business Administration and Computer Information systems in partnership with the University of London, in England and Education Studies with the University of Edith Cowan in Australia. It also provides a range of Foundation/Access courses. However, many students follow degree courses and higher training courses overseas at universities or education institutions through a system of scholarship.

(f) Teacher Training

Teacher training has changed over the years from a two-year to three-year course after which teachers return for a further year of in-service training. With the closure of the National Institute of Education, the training of teachers is undertaken by the University of Seychelles. The University of Seychelles offers both pre-service and in-service four-year courses for teachers.

Teacher training is still a major concern. Whereas in primary school very few teachers are trained to degree level and there are still untrained teachers (about 18 %) in the system although just about all primary teachers are Seychellois. In secondary schools there is such an acute shortage of qualified Seychellois teachers that a large number of expatriates have to be recruited (about 30%). Moreover, recruitment of Seychellois students to train as teachers is a constant problem since teaching remains an unpopular option for many school leavers and it is difficult to recruit an adequate number of student teachers with the relevant academic profile.

(h) Curriculum Development

The national curriculum aims to nurture each child to his or her full potential, to discover his or her talents and to develop in him or her, a passion for life-long learning. Students go through a broad range of experiences to develop the skills and values that they will need for life. The broad-based curriculum imparts literacy, numeracy, trilingualism, the sciences, humanities, aesthetics, physical education, civics and moral education.

A National Curriculum Framework was developed in 2001. It describes the components which are fundamental to teaching and learning in Seychelles schools, It states all underlying principles which will guide all curriculum development and give direction to teaching and learning. It specifies the content of the National Curriculum in terms of essential learning areas and describes in broad terms the main learning objectives of each area. It outlines the essential skills that should be developed by all students and indicates the desirable attitudes and values to be promoted. The framework also outlines the policy for assessment at school and national level

The curriculum in the primary school focuses on communication skills, broad academic skills, and personal/social skills. Creole, (the mother tongue), English (the language of business and administration), and French (which historically remains very much part of the Seychellois culture) are the three languages taught. At the same time, a wide range of subjects - including Mathematics and Science, Social Science, some aspects of the Arts, Physical Education and Personal and Social Education - are also included. Whilst Creole is the medium of instruction in Crèche, P1, and P2, English becomes the language of instruction throughout the school system from P3 onwards. Emphasis is placed on English as a key language in learning and teaching.

As the Ministry of Education focuses on a broad-based, balanced education, all students are offered a combination of core and selected subject options. From S1 to S3 students follow a core curriculum. This is followed by an option system, which caters to a range of students' interest, as they prepare for IGCSE. The overriding objective of the Ministry of Education is to deliver a curriculum that should produce flexible, adaptable, international learners as part of the human resource development strategies of a small state.

(i) Administration of school education

Government spending over the last ten years reflects a staunch commitment to the education of the young people of Seychelles. The budget allocation has been maintained at around 12 to 13 percent of the national expenditure and it actually reached 14.8 percent of the 2011 budget.

Expenditure of the budget is centralized as the Ministry of Education set fairly tight centrally determined framework that applies to all the schools in the system. A common national curriculum is implemented, common textbooks and teaching learning materials are allocated. The Ministry of Education manages the schools through individual school heads. It controls facilities, resources, staffing, and budgetary allocation. One of the important objectives of the education system is to provide equal opportunities for all and to distribute resources equitably. However, as part of the recent reform school heads should be able to make more decisions on significant matters related to school operations and become more accountable. This will be comment later on in this chapter.

1.3 Education Policy

For the last two decades, the education system of Seychelles has been guided by the following policy concerns: education for all, education for life and education for social and national development. Both the previous statement, Education for a New Society (Ministry of Education and Youth, 1984) and the more recent document, Education for a Learning Society (Ministry of Education, 2001) are guided by egalitarian principles of providing equal opportunities, the humanitarian principles of social justice and the educational principles of experiential learning. These policies provide the necessary framework for the development and implementation of structures and strategies to further

promote the holistic and integrated approach to the provision of quality education and training opportunities for all Seychellois.

The goals and objectives of education and training set out in the policy document are encapsulated in the following principles each of which has several dimensions:

Equity, which encompasses equality of access to compulsory education, equitable sharing or resources, equal opportunity for optimum achievement ensuring that the context, content and medium of education are equally and favourable for boys and girls, and catering for learners with special needs.

Quality, which includes institutionally-based planning for development and improvement, integrating mechanisms for monitoring and self evaluation, complementarities of external and internal evaluation; the creation of conditions for institutions to become "learning organizations", improving institutions through staff development, integrating evolving technologies; aiming for service excellence and facilitating participation of stakeholders in education.

Accountability, which includes partnerships with parents and communities, target setting and development planning; transparency in reporting on performance; integration of assessment into education, teaching and evaluation; cost effectiveness through efficient use of resources and development of professional attitudes of accountability amongst teachers and students.

Viewed from the perspective of outcomes, the education system is geared towards achievement, in learning, achievement for empowerment, productivity, social cohesion and global participation.

1.4 Recent educational reform

In 2009, the Ministry of Education developed an Education Reform Action Plan (ERAP) to make wide ranging reform in the system of education at all levels. This included structural reviews at central, school, higher education levels with the aim of transforming the education system to provide for the diversity of education needs and national priorities, to ensure quality education, to improve the governance of education institutions and to promote the development of empowered and responsible citizens.

The education system needed to be reformed to meet the diverse needs of young people and to match these with national development. At primary level strengthening of the early childhood curriculum was advocated to increase the levels of literacy, numeracy and life skills, to introduce diagnostic measures, and set up achievement standards. At the secondary level the structure and curriculum was to be reviewed to better cater for the needs and abilities of students and to link their interests with economic activities in the country. At post-secondary and higher education level legal framework for higher education and training institutions were to be developed.

Quality in education needed to assured by establishing an inspectorate system for primary and secondary schools, developing a centre for curriculum and teacher support, activating the role of the University of Seychelles in teacher training, developing mechanisnm to ensure the professionalism of teachers, providing more autonomy to schools and reinforcing the links between schools and the community.

Within the reform agenda the importance of forming responsible and empowered citizen was also emphasized. This included the introduction of a new pastoral system in primary and secondary schools that will foster self-development and empower young people to become responsible caring, co-operating members of society, enhancement of the Personal and Social education to include citizenship education programme

For many of these major policy concerns of the Ministry of Education systematic information is needed to clarify some of the main issues, make appropriate policy decisions and evaluate policy implementation. SACMEQ policy research studies can make a major contribution to the development of primary education in Seychelles.

1.5 The SACMEQ Consortium

The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) is a network of ministries of Education located in the Southern Africa Sub-region. SACMEQ's main aim is to undertake co-operative policy research in order to generate information that can be used by decision-makers to plan and improve the quality of education.

The programme of educational policy research adopted by SACMEQ has three main features that have optimized its contributions to the field of educational planning. First, it provides research-based advice on high priority educational policy issues that have been identified in a collaborative fashion. Second, it integrates research and training activities aimed at long-term institutional capacity building. Third, the Ministries of Education (via decisions taken during the biennial SACMEQ Assembly of Ministers) have ownership of the scope and future directions of SACMEQ' research and training programme.

The Ministries of Education participating in the SACMEQ project are: Kenya, Malawi, Mozambique, Namibia, Swaziland, Tanzania (mainland), Tanzania (Zanzibar), Uganda, Zambia, Zimbabwe, Botswana, Lesotho, Mauritius, South Africa and Seychelles.

SACMEQ has already conducted two major studies, SACMEQ I (1995-1998) and SACMEQ II (2000-2002). The Ministry of Education of Seychelles did not participate in SACMEQ I. However, by 1998 Seychelles became a fully-fledged member and participated in SACMEQ II and now SACMEQ III.

a) Impact of SACMEQ II in Seychelles

SACMEQ has had considerable impact on the education system of Seychelles and the following are a few selected examples of the use to which SACMEQ research results have been put.

- to implement a non-streaming policy
- for the development of the project to Improve Pupil Achievement in Mathematics (IPAM)
- for the development of a study on Special Needs Education
- to evaluate School Improvement Project and Child Development Study
- as inputs to the development of the assessment policy
- in educational reforms relating to Early Childhood Education and the re-structuring of secondary education
- as a model to design and conduct the Seychelles Integrated Adult Literacy Survey (SIALS)

Furthermore the SACMEQ training component that accompanies all SACMEQ research activities has equipped planners with high level skills in educational research, planning and management. Lastly, results from the SACMEQ II project have initiated high level policy discussion on the quality of education in Seychelles and generated general debates about the evaluation of the school curriculum, the training of teachers in differentiated pedagogies, the use of achievement levels in teaching, assessment of pupils, training of curriculum leaders and the role of parents and the community in pupil learning.

b) Aims of SACMEQ III

The aims of the SACMEQ III Project are to:

- determine if the conditions of primary schooling have improved, remained the same, or deteriorated between 2000 and 2007;
- determine changes in the level of access with regard to human and material resources within regions and across regions within countries;
- determine if reading and mathematics achievement of Primary 6 pupils and their teachers in 2007 in Seychelles has improved, remained the same or deteriorated between 2000 and 2007;
- undertake a special sub-study on HIV AIDS issues in primary schools.

1.6 The structure and contents of the report

This report consists of nine chapters. After the preceding introductory chapter, eight other chapters follow. In the next chapter, *Chapter 2*, procedures undertaken in order to conduct the SACMEQ III study has been described. Detailed explanations were given of the development of instrumentation and the fieldwork operation. Most of this section described aspects of the SACMEQ III Project research programme that were common across countries. The seven other chapters of this report concentrate on the educational policy implications of the results arising from the data analyses.

Each of these chapters addresses one of the main policy questions described in the first chapter. In *Chapter 3* the personal characteristics, the home backgrounds and aspects of the Primary 6 pupil learning environment have been presented. In *Chapter 4* the characteristics of their teachers and conditions in the classroom have been discussed. In *Chapter 5* the characteristics of the school head and the kinds of schools in which the pupils were have been described. *In Chapter 6* access to physical and human resources to schools and classes have been examined. In *Chapter 7* the achievement results of pupils in reading and mathematics have been reported. *Chapter 8* analyses pupil and teacher knowledge on attitudes to HIV and *AIDS* issues. Finally, *Chapter 9* presents an 'Agenda for action' which summarises the policy suggestions, classifies them in terms of low to high costs, and indicates whether they involve, short-, medium-, or long-term action.

Chapter 3
Characteristics of Pupils and their Learning Environment

3.1 Introduction

Regions used in this report

The results from the survey of 24 schools have been grouped by region. The groups of schools were based on geographical clusters that have been established in the early 1980s for networking purposes by the Ministry of Education. This classification has been used for teaching and learning support to schools. In this study one private school was included in its geographical area. The schools included in each region were as follows.

Central	Bel Eau, Independent, La Rosière, Mont Fleuri, Plaisance
Eastern	Anse Aux Pins, Cascade, Pointe Larue
Island	Baie Ste Anne, Grand Anse Praslin, La Digue, Silhouette
Northern	Anse Etoile, Beau Vallon, Bel Ombre, Glacis, La Retraite
Southern	Anse Royale, Baie Lazare, Takamaka
Western	Anse Boileau, Grand Anse Mahé, La Misère, Port Glaud

A note on the interpretation of the data analyses

Before presenting the results, three points should be stressed. The first is that the variables presented in this chapter represent a small subset of the larger number of variables for which data were collected. The Ministry will make a separate publication containing descriptive statistics for all variables in the study available to interested readers.

The second is that a sampling error is attached to each estimate presented. In Seychelles the intention was to include all the Primary 6 pupils as the sample. However, the sampling errors have been calculated with the assumption that the P6 sample was drawn from a hypothetical overall population.

The third point is that in interpreting the values in Table 3.1 and other tables throughout this report, it is important to remember that the percentages and means have been presented in terms of pupils. That is, pupils were the units of analysis - even though some variables referred to teachers or schools. Where a percentage for a variable that describes teachers has been presented, this percentage should be interpreted as ‘the stated percentage of pupils was in schools with teachers having the particular characteristic’. Similarly, a percentage for a variable that describes schools should be interpreted as ‘the stated percentage of pupils was in schools with the particular characteristic.’

Specific policy questions related to pupils and their leaning environment

As a starting point, in order to guide the data analyses, the first broad educational policy issue identified at the end of Chapter 1 was transformed into a set of specific questions that would lead to structured responses. These questions have been posed below:

1. What were the age, gender distribution, and pre-school attendance profile of Primary 6?
2. What was the parents' educational background?
3. What were the characteristics of the homes of Primary 6 pupils?
4. What was the socio economic status of Primary 6 pupils?
5. What was the situation concerning school location, travel to school, absenteeism and grade repetition?
6. What were the parent/pupil interactions about schoolwork in the home?
7. To what extent did pupils in P6 receive and do homework in the Seychelles?
8. To what extent did pupils in P6 have extra tuition in the Seychelles?
9. What were some of the changes from 2000 to 2007 for questions 1 to 8?

3.2 Personal characteristics of pupils

Information about some of the characteristics of the pupils, their parents and the homes in which they lived was obtained from the pupil questionnaire. For the pupils this included their age, gender, the number of meals they had per week, the frequency with which they spoke English outside school, and their pre-school attendance record. With regards to the parents, pupils were asked if their parents were alive and the education of their parents. Aspects about the homes of pupils consisted of location of where the pupils live, the number of books in their homes, conditions of the house in which they lived and the number of possessions in the home. Responses to the last four questionnaire items were used to derive the socio-economic status of the pupils. From this information twelve indicators have been used to provide a measure of pupil characteristics. Table 3.1 contains summarized information about those twelve indicators for 2000 and 2007 for the six educational regions in Seychelles.

a) Age

In the development of the curriculum it is important to take into consideration the age of the pupil. This will determine not only the materials that are being used but also at what particular age certain topics or certain aspects of the curriculum would need to be introduced. Therefore, it is useful to find whether pupils are completing primary education are younger or older. In the second row of Table 3.1a , it can be seen that the average of age of pupils have remained more or less the same from 2000 to 2007. The mean age of pupils for Seychelles was 138 months or about 11.5 years for SACMEQ II and SACMEQ III with no variation amongst regions. Thus it is fair to assume that the age of pupils entering primary education has remained constant.

Table 3.1.a: Pupils' characteristics and their learning environment

2000	Age Distribution		Female Pupils		Meals Per Week		Speak English		Pre-School Attendance		Parent Alive		Parents' Education	
	Mean	SE	%	SE	Mean	SE	%	SE	%	SE	%	SE	Mean	SE
Central	138.7	0.23	52.9	2.2	10.3	0.08	85.9	1.50	xx	xx	xx	xx	8.9	0.08
Eastern	138.0	0.29	48.3	3.5	10.3	0.12	76.9	3.00	xx	xx	xx	xx	8.6	0.13
Island	139.0	0.33	44.6	3.9	10.4	0.14	88.8	2.50	xx	xx	xx	xx	8.4	0.17
Northern	139.2	0.31	48.4	3.2	10.0	0.13	83.3	2.30	xx	xx	xx	xx	8.6	0.12
Southern	138.3	0.32	50.2	3.7	9.8	0.14	78.7	2.90	xx	xx	xx	xx	8.5	0.14
Western	139.1	0.31	54.0	3.8	10.5	0.12	84.1	2.70	xx	xx	xx	xx	8.7	0.15
SEYCHELLES	**138.7**	**0.12**	**50.1**	**1.30**	**10.2**	**0.04**	**83.5**	**0.90**	**xx**	**xx**	**xx**	**xx**	**8.7**	**0.05**

2007	Age Distribution		Female Pupils		Meals Per Week		Speak English		Pre-School Attendance		Parent Alive		Parents' Education	
	Mean	SE	%	SE	Mean	SE	%	SE	%	SE	%	SE	Mean	SE
Central	138.5	0.17	49.8	2.26	10.9	0.07	85.3	1.58	96.1	0.87	97.1	0.76	9.9	0.09
Eastern	138.6	0.28	49.6	3.45	10.8	0.10	82.2	2.65	97.2	1.13	97.3	0.74	9.7	0.13
Island	138.7	0.27	48.7	3.56	10.9	0.12	79.6	2.75	99.5	0.51	96.1	1.33	9.3	0.16
Northern	138.6	0.24	45.9	3.43	10.8	0.12	93.0	1.74	98.6	0.81	96.1	1.33	9.7	0.14
Southern	138.3	0.29	51.4	3.78	10.9	0.12	86.5	2.55	89.3	2.29	98.4	0.88	9.7	0.16
Western	138.6	0.29	51.4	3.78	10.9	0.12	84.2	2.60	94.4	1.64	96.7	1.23	9.2	0.15
SEYCHELLES	**138.5**	**0.108**	**48.9**	**1.30**	**10.9**	**0.04**	**85.2**	**0.91**	**96.0**	**0.50**	**96.6**	**0.47**	**9.6**	**0.05**

Table 3.1.b: Pupils' characteristics and their learning environment

2000	Where Pupils Live		Books at Home		Housing Conditions		Home Possessions		Socio-economic	
	%	SE	%	SE	Mean	SE	Mean	SE	Mean	SE
Central	97.1	0.7	51.3	2.75	13.7	0.04	9.0	0.09	641.0	2.55
Eastern	96.1	1.3	35.1	3.87	13.4	0.08	8.6	0.13	616.3	3.81
Island	96.8	1.4	25.9	3.96	13.2	0.09	8.6	0.17	597.1	4.20
Northern	98.0	0.9	54.9	4.40	13.4	0.06	9.2	0.12	631.7	3.89
Southern	97.3	1.2	41.3	4.46	13.2	0.09	8.7	0.14	617.7	4.29
Western	97.1	1.3	40.6	4.35	13.4	0.08	8.2	0.18	614.7	4.51
SEYCHELLES	**97.1**	**0.4**	44.6	1.58	13.5	0.02	8.8	0.05	625.8	1.50

2007	Where Pupils Live		Books at Home		Housing Conditions		Home Possessions		Socio-economic	
	%	SE	%	SE	Mean	SE	Mean	SE	Mean	SE
Central	98.6	0.50	42.9	2.64	13.9	0.04	9.3	0.07	641.2	2.65
Eastern	98.5	0.80	42.3	4.00	13.7	0.06	9.1	0.10	627.2	3.75
Island	99.0	0.70	30.5	3.14	13.5	0.06	8.8	0.13	608.4	3.49
Northern	98.6	0.80	40.0	3.85	13.8	0.04	8.9	0.12	628.6	3.82
Southern	98.9	0.80	31.2	2.96	13.8	0.05	8.8	0.11	623.7	3.74
Western	95.4	1.40	33.9	3.03	13.8	0.06	8.9	0.12	622.9	3.74
SEYCHELLES	**98.2**	**0.30**	**33.0**	**1.36**	**13.8**	**0.02**	**9.1**	**0.04**	**628.6**	**1.42**

b) Gender

One of the prerequisites for gender equity in education is to ensure an even distribution of both sexes in the school system. The data presented in the second row of Table 3.1a indicated that there has been a slight decrease (1%) in the percentage of girls in Primary 6 classes from 2000 to 2007 in Seychelles. The decrease is noticeable in Central (2%), and Western and Northern (3%). Moreover, in 2007, Northern region had the lowest percentage of girls (45%) in Primary 6 classes.

Just the same, at the national level the gender balance has not changed very much from 2000 to 2007. It is pleasing to note that the proportion of girls in Island region has increased by five percentage point thus reaching a more equitable level. However, there may be disparities in the enrolment of boys and girls in the Northern region which may need further monitoring.

c) Meals

The third column of Table 3.1a concerned the nutrition of the pupils in terms of having three meals a day. The question was asked about a morning meal, a midday meal, an evening meal, and how many times a week they ate each of the meals. An index of regular meal was used in which a score of 3 meant that the pupils did not eat at all, while a score of 12 indicated that they ate every meal each day.

The mean score for Seychelles had increased slightly by about one percent from 2000 to 2007. Out of a maximum score of 12, Seychelles registered a mean score of 10.9 in 2007. This would indicate that the majority of P6 pupils were having three meals per day. However there was still a group of pupils who were not eating regularly. When the frequency distribution of the meals index for 2007 was examined it was found that there were 150 (slightly fewer than in 2000) pupils who had a score of less than 8. This would indicate that they had less than two meals per day every day of the week. It may be necessary to find out more about these particular children and their parents. It may well be that this nutritional problem is affecting a particular type of children and the Ministry of Education may need to investigate further.

Policy Suggestion 3.1: As part of the national campaign to sensitise children and parents about proper nutrition, the Ministry of Education should collaborate with the Ministry of Health to identify pupils in schools who may not be eating regular and balanced diets and initiate special nutritional sessions with the parents concerned.

d) Speaking English

In Seychelles the language of instruction is English from Primary 3. It has been shown that when pupils use the language of instruction outside the school, mainly at home and in the community, this has a positive relationship with learning. Therefore, the pupils were asked if they spoke English outside school and they had to choose between four options which

were coded as follows: 'Never'=1, 'Sometimes'=2, 'Most of the time'=3, and 'All the time'=4. To build the indicator as presented in Table 3.1a the responses were re-coded so that the first options was zero and the last three were re-coded as 1. The percentage of pupils who said that they spoke English at least sometimes outside the school context had been presented in the fourth column of Table 3.1.

It can be seen that a large majority of pupils spoke English at least sometimes outside school. In 2000 the percentage value recorded was about 83 percent. By 2007, this had gone up to 85 percent. This is a clear indication that more and more pupils were speaking English. At the regional level, there has been a moderate increase in Eastern (6%), and Southern (8%). On the other hand there has been substantial increase in the number of pupils speaking English outside school in Island and Northern regions with about 10 percentage points difference.

In Seychelles there are three national languages, Creole, French and English. However, English is the dominant language since it is the language mostly used for official purposes and the preferred language apart from Creole for many Seychellois. It is to be expected that a large proportion of pupils would speak at least some English outside school. However, more information may be needed to learn about the English Language environment of pupils in Island and Northern regions.

e) Pre-School

In SACMEQ III, information about the learning experiences of pupils before enrollment in primary school was collected. Pupils were asked if they attended pre-school, nursery or kindergarten or reception classes before Primary 1, and the length of time they had attended. The options were coded as follows:

'I have never attended a pre-school'=1, 'A few months'=2, 'One year'=3, 'Two years'= 4, 'Three or more years'=5. These responses were recoded so that the first three options equal zero and the last two equal 1. In the fifth row of Table 3.1, the percentage of pupils who had attended at least two years of pre-school has been presented.

It is evident that in Seychelles the large majority of children attended pre-school and 96 percent of them had attended at least two years of pre-school. There were minimal variations across regions with all regions registering figures above or just around the average for the country. These figures compares favourably with other SACMEQ countries as the SACMEQ average has been estimated at around 60 percent.

Government pre-school are managed by the primary school administration. In effect, they are attached to a primary or are "satellites" of primary schools. It is therefore expected that pupils will enter primary schools directly after completion of the second year of pre-schooling. The Ministry of Education is placing emphasis on Early Childhood Education to lay a solid foundation for learning and the development of pre-school education is part of

that Early Childhood Education reform. Although pre-school is not compulsory, parents seem to be making good use of the provision.

f) Parents' Education

The sixth column of figures in 3.1a relates to the parental education of the Primary 6 pupils. Parental education has been identified as a key component of the socio-economic status of pupils. It is an important factor in the achievement level of children since it is assumed that parents with a high level of education will tend to create more conducive learning environment in the home. Separate questions were asked about the mother's and the father's level of education.

The responses were code as follows:

'Did not go to school and had no adult education'	=	1
'Did not go to school and had some adult education'	=	2
'Completed some primary education'	=	3
'Completed all primary education'	=	4
'Completed some education/training after primary education'	=	5
'Completed some secondary education'	=	6
'Completed all of secondary education'	=	7
'Completed some education/training after secondary education'	=	8
'Completed some university education	=	9
'Completed a university degree'	=	10
'I do not know'	=	11
'I do not have a father or male guardian'	=	12

These were re-coded to be consistent with SACMEQ II. The first two responses were collapsed and coded as one. The third responses was coded as two, the fourth as three, firtf and sixth as four, seventh as five, eighth and ninth as six. Eleven and twelve were placed as system missing. The new variable for parental education has 6 valid values so that comparison can be made between SACMEQ II and SACMEQ III. The values for each child's mother and father were summed to provide the index of 'Parents' Education'. A score of 1 indicated that neither parent had received any formal education, and a score of 12 indicated that both parents had received some post-secondary education.

In Table 3.1a (column 7) the mean score of parents have been tabulated for SACMEQ II and SACMEQ III. One of the most pertinent remarks about those results is that the educational level of parents in Seychelles had increased considerable by almost 1 score point. This increase is reflected in all the educational regions. As in SACMEQ II the Central region recorded the highest index of about ten score points. This is understandable as the educational level of parents with pupils in the private school tends to be higher than that of parents with pupils in government schools. However, the overall results would suggest that most pupils have parents who both completed at least all of primary and secondary education. Through the educational reform the Ministry of Education is aiming

to achieve universal secondary education and these findings would give clear indication that the educational level is improving nationally.

g) Where Pupil Live

The family circumstance in which the pupils live will also have an influence on how they cope with learning at school. Unstable family situation may interfere with pupil learning and may lead to anti-learning behavior. In order to capture some aspects of the family situation pupils were asked where they stayed during the school week. They had to choose between five options coded as follows:

'In a home with my family/relatives'	=	1
'In a house with other people who are not members of my family'	=	2
'In a hostel/boarding school accommodation'	=	3
'In an orphanage or children's home'	=	4
'Other'	=	5

These responses were recoded so that one equals the first option and the rest zero.

In the first column of Table 3.1b, the percentage of pupils who live in a home with their family or relatives can be scrutinized. In Seychelles the large majority of Primary 6 pupils said that they lived with family or relatives. The figure which was 97 percent in 2000 had increased to 98 percent in 2007. There was very little regional variation except for Western region where only 95 percent of pupils were living with their family or relatives. It would be worth studying the social situation in the Western region to determine possible reasons for this. It is likely that certain social circumstances had led 5 percent of those Primary 6 children to live away from their parents or relatives.

h) Books at Home

The data in the second column of Table 3.1b are indicators of an aspect of the quality of the learning environment in the pupils' home by finding out the number of books which pupils have in their homes. Previous studies have shown that the availability of books in the home has an influence on school achievement in reading. For SACMEQ III pupils had to write down a number to indicate the number of books in their homes. They were instructed not to count newspapers and magazines or books that they use in school. In SACMEQ II this variable was categorical as pupil had to choose from a range from 6 categories which were as follows:

1= 'no books in the home', 2= '1-10 books', 3='11-50 books', 4='51-100 books', 5='101-200 books', and 6= '201 books and more'. In order for the measures in the two studies to be consistent, in SACMEQ III a variable was created which was equivalent to that in SACMEQ II. The two variables were than re-coded where the first two responses were assigned a value of zero (no books at home) and the rest a value of 1 (books at home), The

values in Table 3.1 (column 8) represent the percentages of pupils who had books at home.

The findings showed that the number of pupils with books in the home was very low. In fact the percentage of pupils with books at home for Seychelles had decreased from 2000 (around 44 %) to 2007 (around 33%). Decreases of more than ten percentage points have been recorded in Northern, Southern and Western regions. Only one region, the Island region registered a slight increase of about five percent.

These results may be suggesting that in spite of the drive to improve the level of literacy in the country and in school, it has not been possible to change the reading culture in Seychelles, and perhaps with readily available digital reading materials, possession of books in Seychelles is loosing its importance. However, with the introduction of the new reading scheme in English and the development of locally produced reading material in the mother tongue for early childhood learners as part of the Education Eeform, perhaps the Ministry of Education should re-asses its role in developing the reading habits of school children.

Policy suggestion 3.2: The Ministry of Education should develop contact with the National Library to develop projects to increase the number of books in the library and have regular sessions with pupils to encourage them to borrow books from the National Library.

i) Home Conditions

Another component of the home background of the pupils is the physical quality of the home. This has been assessed by asking the pupils a number of questions about the source of lighting, the type of flooring in the home, and the materials used to build the outside wall and the roof.

(i) Source of lighting

From the original responses which had six options the following four options were derived:

Fire/There is no lighting	= 1
Candle/Paraffin or oil lamp	= 2
Gas lamp	= 3
Electric (mains, generator, solar) lighting	= 4

(ii) Floor covering or surface

Similarly, from the original five responses the following four options were derived:

Earth/Canvas	= 1
Wood	= 2
Cement/concrete	= 3
Carpet/tiles	= 4

(iii) Outside Wall

In the same way, from the original six responses four options were derived:

Cardboard/Grass thatch	= 1
Stones/Mud bricks	= 2
Metal/Wood	= 3
Cut stones/Bricks	= 4

(iv) Roof

Similarly, from the original five responses four options were derived:

Cardboard/Grass thatch	= 1
Metal/Asbestos	= 2
Cement/Concrete	= 3
Tiles	= 4

These coding were consistent with those derived options from SACMEQ II. The responses were summed to provide an index of 'Housing Conditions'. The index had a minimum score of 4 and a maximum score of 16.

In the 10th column of Table3.1, the mean score of the 'Housing Index' has been presented by regions. It can be see that the overall mean was fairly high with a score of 13 and no difference between 2000 and 2007. There was also very little variation across regions. These results would indicate that housing conditions were fairly good in Seychelles. Most houses would have electricity, concrete floor and outside wall, and metal sheet roofing. It may be fair to assume that in Seychelles pupils live in housing conditions which are not detrimental to providing a learning environment

j) Home Possessions

The sets of data for 2000 and 2007 in column 11 of Table 3.1 indicate the number of possessions in pupils' home. A question on the pupil questionnaire asked about material possessions and amenities. In SACMEQ III, there were 31 items, however, to be consistent with SACMEQ II, only 13 items were used: These were daily newspaper, weekly or monthly magazine, radio, TV set, video cassette recorder, cassette player, telephone/mobile, refrigerator/freezer, motorcycle, car, piped water, electricity (mains, generator, solar), table to write on. The number of possessions in the home was summed for each pupil. The lowest score was zero and the highest score 13.

The number of possessions in homes in Seychelles as a whole was 9 out of 13. There has been a slight increase from 2000 to 2007. Pupils in the Central region was more wealthy with the highest number of possessions (9 score point) whilst pupils in the Island and

Southern region were the poorest. It can be assumed that pupils in Seychelles were not particularly disadvantaged by the material wealth of the home as judged by the home possession index.

k) Socio-economic Status (SES)

In the last column of Table 3.1 data on the SES of pupils have been displayed. The SES variable was created by using the 'Parents' Education', 'Home Possession' and 'Housing Conditions' indices. The scores on those indices were summed and the Rasch scaling approach was used to derive the SES variable with a mean of 500 and a standard deviation of 100.

The figures in the last column of Table 3.1 indicate that the overall SES score for Seychelles is moderately high with a score of 628 points, well above the SACMEQ mean. Minimum regional variation can be noted. Central region with wealthier pupils had the highest score (641) whilst Western region with 622 score points had the poorer pupils. There has been an increase in score points in all except Central which maintained its high status. In the Island region the rise in score points was the highest – an increase of 11 score points. Northern was the only region with a decrease in score points but again that was very slight. Although the effect of SES on pupil learning has been well documented, more detailed analysis would be required to measure its impact in the context of Seychelles. In a later chapter of this report it will be possible to comment further on the relationship between SES and pupil educational achievement.

3.3 School-level factors experienced by pupils

Inputs to schooling must also take into consideration some of the elements of the school and teaching learning environment which may be related to students learning experiences. Some of these school-level factors may be directly related to students learning and achievement whilst others may provide optimal conditions for positive experiences of schooling. In order to make policy decisions about school location, absenteeism, grade repetition, homework and the distance pupils have to travel to get to school, it is necessary to devise ways of monitoring some of these factors. Information has been gathered to provide school data which can be analysed to gauge the situation and also to document change. In Table 3.2 data have been presented for the six education region in Seychelles for 2000 and 2007. The third row of figures indicate that in 2000 for Central region all school heads said that their schools was situated in or near a city or small town, the mean number of days students were absent was 1.06, forty-two percent of pupils reported that they were absent due to illness, 13 percent had repeated at least one grade, 62 percent was given homework, 29 percent had some help with their homework at home most of the time.

(a) School location

School heads were asked to describe their school location and they were given four options with the following coding: 'Isolated'=1, 'Rural'=2, 'In or near a small town'=4. For the purpose of the analysis the first and last two of the options were collapsed and the percentage of pupils with school heads who located their school in or near a small town or in or near a large town or city has been presented in the second column.

It can be seen that in 2007 in Seychelles about two-thirds of the pupils were in schools with school heads who located their schools in or near a town. However, there were regional variations. It is to be expected that in the Central region all the schools would be very near or in the main town. In two other regions, Island and Northern around three-quarters of the pupils had school heads who reported that their school was in or near a town whilst in Eastern and Southern regions about half of the pupils had such school heads. The exception was the Western region where only 11 percent of pupils had the school heads who located their school in rural or isolated areas.

Seychelles is a small country and distances between rural and town areas are not so great. However, it is necessary to bear those distinctions in mind to ensure that the learning environment of the school and experiences of pupils are not adversely affected. Later on in this report the impact of school location on achievement and resources will be examined.

b) Days absent and reason for absences

The figures in the third row and fourth column of Table 3.2 show that for 2007 the average number of days absent for Seychelles was more than a day and that on the whole more than three-quarters of the pupils mentioned illness as the reason for their absences. Pupils in Island had the most absenteeism (mean average about two days) and almost 90 percent of them said that they were absent because they were ill. Central had the least number of pupils absent (average about a day) and 8 percent of them also said they were ill.

The alarming message which is conveyed when the two sets of figures are compared (for 2000 and 2007) is that thee has been a rise in absenteeism and a relative increase in the number of pupils who were absent because of illness. The average number of days absent has doubled from 2000 to 2007 and similarly the percentage of pupils with illness as the reason for their absences had more than doubled. This has affected all the regions. The Ministry of Education through the Student Welfare Section should discuss ways of addressing the problem.

Policy suggestion 3.3: The Ministry of Education needs review the new Pastoral Care system and implement measures to reduce absenteeism in the primary school.

c) Grade Repetition

Grade repetition is often associated with undesirable educational outcomes. It can affect the learning experiences of individual pupils, it can affect the smooth operation of the school and increase the overall cost of schooling (Hungi, 2010) To build an indicator of grade repetition in primary schools, pupils were asked the number of times they had repeated a grade since they started school including Primary 6. They had to choose between four options to which the following codes have been assigned:

'I have never repeated.'	= 1
'I have repeated once.'	= 2
'I have repeated twice.'	= 3
'I have repeated three or more times.'	= 4

For the analysis options 2, 3 and 4 were collapsed and the figures in the fourth column of Table 3.2 represent the percentage of pupil who have repeated at least once. As it can be noted the rate of repetition is very low in Seychelles. In 2007 only about two percent of pupils had repeated at least a grade and variations across regions was minimal. There were more pupils repeating grades in the Central and Island (about 3 %) whereas in Northern none of the pupils had repeated a grade.

When the figures for 2000 and 2007 are compared it becomes quite apparent that there has been considerable reduction, by about five times, in the number pupils repeating grades. The reduction was quite considerable in Central and Southern - about four and five times, respectively.

In Seychelles the Ministry of Education has adopted the policy of automatic promotion. But in exceptional cases such long absences or parental request pupils may be allowed to repeat a grade. The results from this study indicate that Seychelles do not have a problem with grade repetition and that the Ministry of education has been quite successful in implementing its policy.

Table 3.2: School-level factors experienced by pupils

2000	School location		Days absent		Absent due to illness		Repeated at least once		Homework given		Homework corrected		Homework explained		Homework help at home		Travel distance to school	
	%	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	100.0	0.00	1.06	0.07	42.5	2.20	13.2	1.4	62.5	2.1	xx	xx	xx	xx	29.7	2.0	xx	xx
Eastern	100.0	0.00	0.42	0.06	24.2	3.00	5.9	1.7	38.4	3.3	xx	xx	xx	xx	37.9	3.4	xx	xx
Island	100.0	0.00	1.07	0.10	52.7	3.90	8.1	2.2	52.5	3/8	xx	xx	xx	xx	28.5	3.5	xx	xx
Northern	100.0	0.00	0.75	0.08	40.6	3.10	9.9	1.9	68.5	2.9	xx	xx	xx	xx	44.3	3.2	xx	xx
Southern	50.5	0.00	0.74	0.12	24.6	3.20	10.9	2.3	51.7	3.3	xx	xx	xx	xx	22.3	3.0	xx	xx
Western	11.7	0.00	0.82	0.10	38.6	3.70	8.8	2.1	52.9	3.8	xx	xx	xx	xx	28.8	3.5	xx	xx
Seychelles	**83.9**	**0.00**	**0.86**	**0.10**	**38.2**	**1.20**	**10.3**	**0.80**	**59.3**	**1.2**	**xx**	**xx**	**xx**	**xx**	**32.2**	**1.2**	**xx**	**xx**

2007	School location		Days Absent		Reason due to illness		Repeated at least once		Homework Given		Homework corrected		Homework Explained		Homework Help at home		Travel distance to school	
	%	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	100.0	0.00	1.35	0.09	81.5	2.50	3,3	0.80	86.3	1.50	75.9	1.70	50.8	210	36.6	2.10	76.5	1.7
Eastern	45.6	0.00	1.75	0,15	87.4	3.10	0.9	0.70	95.1	1.50	94.7	1.10	51.8	3.10	41.0	3.30	88.9	2.2
Island	70.1	0.00	2.05	0,16	88.7	2.80	3.6	1.30	84.7	2.40	97.5	1,10	60.6	2.90	48.3	3.40	85.2	2.4
Northern	81.7	0.00	1.82	0.18	83.2	3.30	0.0	0.00	100.0	0.00	96.3	1,30	68.0	2.40	40.3	3.30	88.6	2.0
Southern	57.3	0.00	1,78	0.17	91.3	2.90	1.7	1.00	96.6	1.40	96.6	1.30	82.6	2.80	39.7	3.40	65.0	3.5
Western	10.6	0.00	1,99	0.17	79.8	3.90	2.0	1.00	94.3	1.70	82.0	2.70	71.8	3.20	45.7	3.50	71.9	3.1
Seychelles	**69.0**	**0.00**	**1.70**	**0.06**	**84.6**	**1.30**	**2.2**	**0.04**	**91.6**	**0,70**	**87.6**	**0.80**	**61.3**	**1.10**	**40.9**	**1.20**	**79.2**	**1.0**

d) Homework given

Pupils were asked how often they were usually given homework. They had to tick one of the five responses coded as follows:
'I do not get homework'=1
'Once or twice each month'=2
'Once or twice each week'=3
'Most days of the week'=4

The first three categories were collapsed and the indicator presented in the sixth column is a measure of the percentage of pupils who reported that they received homework 'Most days of the week.' In Seychelles in 2007 there were about eighty-six percent of pupils receiving homework on most days of the week. There was very little variation amongst regions although it must be noted that all P6 teachers, at least according to their pupils' response, gave homework assignments most days of the week.

When the figures for 2007 are compared to those of 2000, a vast improvement can be noted. There has been an increase of over 30 percentage points from 2000 to 2007, overall, and in all regions an increase had been registered with Eastern recording the largest increase of about 55 percent. Most schools have developed their own policies about homework and teachers plan homework assignments to ensure that students receive some homework at least four days in the week. The results would indicate that the homework policies in schools are being implemented successfully.

e) Homework corrected and explained

For the SACMEQ III study pupils were asked how often the teacher corrected their work and explained answers to them during the class. Out of the five options presented to the pupils, the data indicating correction of homework and explanation in class was obtained by collapsing the options which stated that the teacher corrected and explained the answers to the pupil's homework 'Most of the time' and 'Always'. In columns 6 and 7 in Table 3.2 the data for 2007 which have been presented, indicate the percentage of pupils who reported that their teachers corrected their homework and explained the answers most of the time or always.

In 2007, about 90 percent of pupils reported that they had their homework corrected most of the time or always. The lowest figure was in Central region with 75 percent. It was not possible to compare the SACMEQ II figures with those of SACMEQ III since the question in SACMEQ III was posed for Reading and Mathematics whilst in SACMEQ II the question was asked generally. Nevertheless, the high value recorded for Seychelles, as a whole, is encouraging.

The situation with teachers explaining answers to homework in class presented a slightly different story. Although the figures for Seychelles overall were still reasonably high (61%). It was certainly not as high as those for "homework corrected" and there was some variation amongst regions. In schools in the Southern region teachers explained the answer to homework assignments in class for 82 percent of pupil. This figure was consistent with the high percentage of pupil receiving homework. On the other hand, in Central and Eastern region about half of the pupils did not receive explanation about their homework from their teachers. Perhaps now that the rate of giving homework is very high, there may be a need to sensitise teachers to the importance of giving feedback to pupils about their homework.

Policy suggestions 3.4: The Ministry of Education should review school policies on homework and ensure that emphasis is placed on the teachers explaining pupils' answers in class.

f) Homework help at home

Parental encouragement has been linked to higher learning outcome. In Seychelles School Councils have been established as part of the Education Reform to bring the school closer to the community and also to encourage parent to participate more in the learning of their children. Parental support given to children with homework provides an indicator of parental interest.

Pupils were asked how often a person at home helped them with their homework. From the four options the responses 'Most of the time' was used as an indicator of parental support with homework. The percentage of pupils responding most of the time has been listed in the 8th column of Table 3.2 for 2000 and 2007. It can be seen that in 2007 in Seychelles less than half of the pupils (about 40 %) received help with their homework from their parent or another concerned adult at home. And there was not much variation across regions. However, the situation had improved since 2000. Although the increase in the percentage of pupils who received help was only about 8 percent, this result may suggest that some of the initiatives of the Ministry of Education are beginning to have an effect.

Policy suggestion 3.5: The Ministry of Education should continue through the Schools Council with its effort to get more parents involved with the education of their children and "home support and parental involvement" should be an important item on the agenda of the School Council of each school.

g) Travel distance to school

The problem of getting to school and back may be a hindrance for pupils who live very far from school with no adequate transporting system. A question was posed to pupils about the

distance they had to travel to come to school. The options were 'Up to .5 kilometre' through different ranges of .5 kilometre intervals to 'Over 5 kilometres. For Seychelles the range 3.5 km kilometers downwards was chosen as an indication of reasonable travelling distance for pupils since, anyway, pupils get free transport if their school is situated beyond a 3.5 kilometre radius .

The percentage of pupils who travel within that distance to school everyday has been presented in the last column of Table 3.2. It can be seen that most pupils (86%) stay within the 3.5 kilometre radius of the school. The Ministry of Education operates a "zoning system" and except for the private school, pupils in general attend school in the district where they live. In exceptional cases pupils are exempted from "zoning" and the parents have to make their own arrangements for transport for their children. On the whole, from the information that has been gathered, it would appear that the Ministry has been quite successful in maintaining the "zoning" policy and pupils are not having difficulty in getting to school.

(h) Extra tuition

Extra lessons are often provided by teachers as part of revision strategies or for pupils with learning difficulties. These are often carried in schools hours and there is no payment. On the other hand the provision of extra tuition which is paid for by parents and is usually carried out outside of the school context has been a subject of controversy in education system. Paviot et al (2008) pointed out that it may be a disadvantage to pupils whose parents cannot pay and the practice may be a challenge to an educational system which is providing quality education for all.

Both in SACMEQ II and SACMEQ III pupils were asked if they received extra tuition, in what subject they received extra tuition and if they thought that these lessons were paid for. The results have been recorded by regions and for Seychelles as a whole for 2000 and 2007 in Table 3.3, in the first row of figures it can seen that for Central region 54 percent of pupils received extra tuition, 23 percent had extra tuition classes in English, 24 percent in mathematics and 36 in other subjects, and for 27 percent of the pupils there was payment.

It can be noted that in 2007 about two-thirds of the pupils did not take extra tuition. However, about a quarter had extra tuition in English and in Mathematics. Those in the Southern region had more extra tuition in English whilst those in Central region had slightly more in mathematics. About a third took extra tuition in 'Other subjects' with those pupils in Central taking more than those in other regions. In all, 27 percent of the pupils said that the lessons were paid for.

Table 3.3: Percentages of pupils taking extra tuition and payment for it

2000	Don't take		English		Mathematics		Other subjects		Payment	
	%	SE	%	SE	%	SE	%	SE	%	SE
Central	54.0	2.10	23.4	1.60	24.0	1.70	36.7	1.90	27.9	2.50
Eastern	40.3	3.10	11.8	2.30	20.1	2.70	20.6	2.70	20.8	4.50
Island	40.8	3.80	23.0	3.30	17.4	3.00	25.4	3.30	33.5	5.70
Northern	45.1	3.20	15.0	2.20	14.5	2.20	31.3	3.00	17.7	3.60
Southern	57.3	3.50	32.3	3.50	21.8	3.00	32.1	3.00	23.8	4.00
Western	36.9	3.40	16.2	2.70	20.8	2.80	16.3	2.80	24.9	5.40
Seychelles	**47.7**	**1.20**	20.5	**1.00**	**20.6**	**1.00**	**29.5**	**1.10**	**25.1**	**1.60**

2007	Don't take		English		Mathematics		Other subjects		Payment	
	%	SE	%	SE	%	SE	%	SE	%	SE
Central	64.4	2.00	25.4	1.80	28.3	1.90	17.1	1.70	50.0	3.40
Eastern	82.3	2.00	12.4	2.30	11.0	2.20	13.9	2.40	70.3	7.50
Island	78.7	2.90	14.2	2.50	17.3	2.70	11.7	2.30	69.0	7.00
Northern	73.7	2,90	12.2	2.10	20.6	2.60	11.8	2.10	48.3	6.50
Southern	67.9	2.30	30.4	2.10	29.8	2.10	27.6	1.80	82.3	4.60
Western	67.2	3.10	10.3	2.20	27.6	2.90	10.2	2.20	23.5	5.10
Seychelles	**71.0**	**1.10**	**18.8**	**0.90**	**23.4**	**1.00**	**15.5**	**0.90**	**45.3**	**0.00**

When the results in 2007 are compared with those of 2000, three main observation can be made: that there is reduction in the number of pupils taking extra classes (from about 53% in 2000 to about 29 % in 2007), that slightly more pupils were taking extra tuition in mathematics in 2007 and that more pupil (almost doubled) reported that there was payment. It would appear from these findings that extra lessons often referred to as private lessons where there is payment has been greatly reduced. However, the Ministry of Education may need to continue to monitor the trend.

Policy suggestions 3.6: Further information may need to be analysed to identify the nature, and extent of the practice, and the role of teachers involved in giving extra tuition so that it does not become a major problem as it can be in other countries.

3.4 Conclusion

One of the interesting findings in this chapter concerns the home circumstances of Primary 6 pupils in Seychelles. The homes of pupil participating in the study tended to be quite wealthy in terms of material possessions but rather poor as learning environment. Although the homes of pupils contained most, if not all, of the basic possessions and facilities, reading materials were scarce. The situation about the number of books at home deteriorated quite considerably. However, there were more parents who were educated at least at secondary level and this may be responsible for the somewhat higher level of support with homework. The Ministry of Education must persist with its efforts to involve parents in school life.

Other aspects highlighted in this chapter were gender, pre-school attendance, absenteeism, grade repetition and homework. There was a reasonable gender balance in all regions and most pupils had had substantial pre-school experience. However absenteeism was a cause for concern as the rate of absenteeism had increased alarmingly. On the other hand, homework received by pupils and corrected by teachers had pleasingly improved thus reinforcing the fact that schools homework policy was being successfully implemented. Nevertheless, teachers may need to pay more attention to giving feedback to pupils and explaining corrected homework assignments.

Chapter 4
Characteristic of Teachers and their Classrooms

4.1 Introduction

This chapter examines selected background characteristics of P6 reading, mathematics, and health teachers. Personal and professional characteristics of teachers and some aspects of the management of their teaching environment are analysed for the SACMEQ II and SACMEQIII Project to measure change and als0 highlight emerging areas of teacher quality which would need the attention of policy makers.

The following specific questions were posed:

1. What were the age and gender distribution of the teachers?
2. What were their housing conditions?
3. What were the academic levels of the teachers?
4. How many years of teacher training and teaching experience did they have?
5. How many in-service courses have they had and how effective were these courses?
6. How many hours did they teach per week and spend in lesson preparation?
7. How frequently did they test pupil and did they had a special section for reporting their subject?
8. How frequently did they meet with parents and get the parents to sign homework?
9. How frequently did they visit education resource centres and what use did they make of these centres?
10. How often did they receive advice from the school head?
11. What were some of the changes from 2000 to 2007?

Indicators to measure personal characteristics of teachers, that is, age, gender and housing conditions have been presented in Table 4.1 for the six education region for 2000 and 2005. For example, in the year 2000, in Central region the average pupils had a reading, and mathematics teacher whose mean age was 40.7 and 30.8, respectively; 100 percent and 78 percent of pupils had reading and mathematics teachers, who were female; 91 and 100 percent of pupils had reading and mathematics teachers whose housing conditions were good or needed only minor repairs.

a) Age

As can be seen from column 2 of Table 4.1, in 2007, the average pupils had a reading, mathematics, and health teacher who was 36.3, 34.4, and 38.7 years of age, respectively. The age range for the health teacher (between 33.6 in the Island region and 44.1 in the Western region) was much larger than that for the reading teacher (32.2 in Southern region and 39.4 in the Western region), and the mathematics teacher (30.3 in Northern region and 37.1 Central). In 2007 the average pupils had a reading teacher who was slightly younger than in 2000. But what emerges from those figures is that, on the whole, the education system still depends to a large extent on teachers who have been in the service for a while.

This perhaps is reflecting the difficulty which the Ministry of Education is experiencing in recruiting teachers.

Policy suggestion 4.1: The Ministry of Education should have discussion with the newly-established University of Seychelles to devise strategies to recruit young teachers.

b) Gender

In columns three, four, and five of Table 4.1, the percentage of pupils who had female teachers has been displayed. In 2007, there was a considerable difference between the proportion of female and male teachers. Ninety-six, 81 and 87 percent of pupils had reading, mathematics and health teachers, respectively, who were female. The proportion of female reading teachers was quite remarkable. Only in Northern region was about one-quarter of the pupils taught by male teachers. For mathematics there were some male teachers in three regions Eastern, Northern and Western regions. The situation was better balanced in Western region where 61 percent of the pupils were taught by female teachers. There were some male teachers teaching health in Central, Northern, Southern and Western. However only in Central region was there about a quarter of the pupils with male health teachers. The domination of women in the teaching force in primary schools in Seychelles is a feature of our cultural heritage. However, it would appear that if one were to compare the 2000 data with the 2007 data one would notice that there are small signs of more male teachers teaching reading at least in Northern region.

Policy suggestion 4.2: The Ministry of Education in collaboration with the University of Seychelles should increase their efforts to recruit male students to train as teachers.

c) Housing conditions of teachers

In Seychelles there have been various schemes to ensure that teachers are properly housed. For example, teachers who are deployed to schools from the inner islands to the main island or vice versa are provided with subsidized accommodation. Returning graduate teachers are supported in buying their own houses. Through the SACMEQ data it is possible for the Ministry of Education to find out if teachers were living in an environment which is not detrimental to their work as a teacher. The Primary 6 reading, mathematics and health teachers were posed the question:

Which of the following most accurately reflects the condition of your living accommodation?
They had to choose between one of the following options coded as below:
‘Generally in a poor state’=1
‘Some parts require major repairs’=2
‘Some parts require minor repairs’=3
‘Generally in good condition’=4

Table 4.1 Personal characteristics of teachers

2000	AGE (YEARS)						GENDER (FEMALE)						HOUSING CONDITION					
	English		Mathematics		Health		English		Mathematics		Health		English		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	%	SE	%	SE	%	SE	Mean	SE	%	SE	%	SE
Central	40.7	0.49	30.8	0.27	xx	xx	100.0	0.00	78.7	1.6	xx	xx	91.7	1.10	100.0	0.00	xx	xx
Eastern	44.4	0.34	41.8	0.45	xx	xx	100.0	0.00	100.0	0.00	xx	xx	100.0	0.00	100.0	0.00	xx	xx
Island	30.4	0.41	33.2	0.34	xx	xx	100.0	0.00	100.0	0.00	xx	xx	89.0	0.00	100.0	0.00	xx	xx
Northern	34.2	0.59	30.5	0.56	xx	xx	93.3	0.00	72.2	0.90	xx	xx	94.6	1.10	95.5	1.10	xx	xx
Southern	41.2	0.59	27.5	0.09	xx	xx	100.0	0.00	80.4	2.60	xx	xx	100.0	0.00	100.0	0.00	xx	xx
Western	36.5	0.53	29.3	0.19	xx	xx	100.0	0.00	60.7	2.70	xx	xx	100.0	0.00	100.0	0.00	xx	xx
SEYCHELLES	**38.5**	**0.22**	**31.9**	**0.15**	**xx**	**xx**	**98.8**	**0.20**	**80.8**	**0.80**	**xx**	**xx**	**95.0**	**0.50**	**99.2**	**0.20**	**xx**	**xx**

2007	AGE (YEARS)						GENDER (FEMALE)						HOUSING CONDITION					
	English		Mathematics		Health		English		Mathematics		Health		English		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	37.6	0.37	37.1	0.37	38.5	0.52	100.0	0.00	100.0	0.00	75.7	1.10	95.0	0.90	100.0	0.00	95.5	0.90
Eastern	36.8	0.52	34.0	0.61	43.3	0.46	100.0	0.00	75.2	2.60	100.0	0.00	89.8	1.60	100.0	0.00	100.0	0.00
Island	36.2	0.52	35.1	0.63	33.6	0.62	100.0	0.00	88.2	2.00	100.0	0.00	100.0	0.00	88.2	2.00	100.0	0.00
Northern	33.8	0.62	30.3	0.21	36.0	0.29	75.8	1.70	100.0	0.00	88.4	1.90	87.4	1.70	100.0	0.00	100.0	0.00
Southern	32.2	0.46	33.9	0.42	37.1	0.32	100.0	0.00	100.0	0.00	86.8	2.50	100.0	0.00	100.0	0.00	100.0	0.00
Western	39.4	0.49	32.0	0.41	44.1	0.25	100.0	0.00	61.1	0.00	91.4	1.60	100.0	0.00	100.0	0.00	81.4	2.50
SEYCHELLES	**36.3**	**0.20**	**34.4**	**0.19**	**38.7**	**0.17**	**96.5**	**0.20**	**81.4**	**0.70**	**87.3**	**0.60**	**95.1**	**0.40**	**98.4**	**0.30**	**95.9**	**0.40**

For analysis purposes, the responses to the first two and last two options were collapsed to provide an indicator with two categories coded as follows: 1= "good condition or need minor repair", 2= "major repairs or poor conditions". In the columns seven, eight and nine of Table 4.1 the percentage of pupils with teachers living in good housing conditions or in houses which need minor repairs have been presented for the six education region.

On the whole, for 2007, the housing conditions for the three groups of teachers were fairly good. Over ninety percent of pupils had teachers whose housing conditions were considered good or in need of only minor repairs. For reading teachers housing conditions in Northern regions was not so good with a figure of 87 percent. On the other hand, in three regions, Island, Southern and Western, all pupils had reading teachers who live in good houses or in houses needing minor repairs. The situation was better still for health teachers - four regions, Eastern, Island, Northern and Southern recorded 100 percent of pupils. The mathematics teachers had the best housing conditions, all but one region (Island about 87 %) had 100 percent of pupils with mathematics teachers living in good housing conditions or in houses needing minor repairs. Generally, there has not been much change in the housing conditions for Primary 6 teachers from 2000 to 2007. However. regular checks by the Personnel and Administrative Section of the Ministry of Education may be necessary to ensure that the housing conditions remain as good as the SACMEQ data has revealed.

4.2 Professional characteristics of teachers

Recruiting and training teachers have been a challenge for the Ministry of Education. With the human resource limitation of a small state such as Seychelles, most of the emphasis has tended to be on training teachers for secondary education. However, from some of the policy discussion generated by the SACMEQ II report and with the launching of the Seychelles University, recruitment and training of primary education teachers to degree level has been initiated. In this report it will be possible to examine information from SACMEQ III and compare it to SACMEQ II to gain a better understanding of the professional characteristics of reading, mathematics and health teachers. Teachers were asked some questions about their level of academic education, years of teacher training and teaching experience.

a) Years of academic education

In the questionnaire teachers were asked about the highest level of academic qualification they had attained. The options given were:

- 'Primary education or equivalent'
- 'Junior secondary education or equivalent'
- 'Senior secondary education or equivalent'
- 'A-level' or some further study but nor a degree'
- 'Tertiary education (at least a first degree)'

Primary education was coded as 6 years, junior secondary as 9 years, senior secondary as 11 years, A-levels as 13 years and tertiary as 15 years. These values were used to calculate the mean number of years of academic education.

In Table 4.2 mean number of years of academic education for the reading, mathematics, and health teachers for 2000 and 2007 in the six education regions has been presented in columns two, three and four. The results for 2007 show that the average Primary 6 pupils had reading teachers who had just over 12 years of education and there was very little variation amongst the regions. The mathematics and health teachers had a slightly lower level of academic education, but again there was no large difference across regions. The situation in 2000 was very much the same for the reading teacher but, worryingly, there was a slight downward trend in the academic education of Primary 6 mathematics teachers.

This would indicate that in 2007 the Ministry of Education still had not managed to increase its primary teaching force with graduate teachers. There were very few pupils benefitting from a reading, mathematics or health teacher with a degree. When the percentage of pupils who had teachers with qualification above tertiary level were calculated, it was found that about five percent (5.2, SE .40) (this figure is lower than that recorded for SACMEQ II) of pupils who were taught by degree-holding reading teachers, and about 3 percent for mathematics (3.5, SE, 0), and the same for health teachers. Eastern, Island, Southern and Western regions were the most disadvantaged with no graduate teachers for reading, mathematics or health. The Ministry of Education has been well aware of this problem and has started a scheme for training in-service primary teachers to degree level. This scheme should continue but it will be necessary to find ways of recruiting and training pre-service teachers to degree level to teach in primary schools.

Policy suggestion 4.3: The Ministry of Education in collaboration with the University of Seychelles should review strategies to recruit and train young people to degree level to teach in the primary school.

b) Years of teacher training

Teachers were asked to indicate the number of years that they had undergone teacher training. The mean number of years of teacher training for the reading, mathematics and health teachers for 2000 and 2007 has been presented in the fourth, fifth and sixth column of Table 4.2.

In 2007, there were some differences in the length of training between the reading, mathematics and health teachers. The average pupils had a reading teacher with about three years of teacher training, a mathematics teacher with almost four year and a health teacher with less than three years. There was some variation amongst regions particularly for reading and health teachers. In the Northern region the average pupil had a reading teacher with less than three years of teacher training whilst in the Southern region the average pupil had a reading teacher with almost four years of teacher training. Similarly, in the Northern region the average pupil had a health teacher with over three years of teacher

training whilst in the Western region the average pupil had a health teacher with under one year of teacher training. These differences are about a year for the country as a whole.

The figures for 2000 are not much different, at least, for reading and mathematics teachers. However, there seemed to be some indication that overall the length of teacher training for the mathematics teachers had increased somewhat, and pupils in the Northern region seemed to have benefitted from mathematics teachers who had longer training in 2007 compared to 2000.

In Seychelles, teacher training has changed over the years from a two-year to a three-year and a four-year course. With the opening of the Seychelles University, a four-year course for Early Childhood and Primary Teachers has been established. The variation in the mean number of years of teacher training has some relationship to the changing programme. However, it is anticipated that by 2015, as the first two batches of newly-trained primary teachers will be recruited into the system, the situation will improve considerably for reading and health teachers as teacher training for English, and Personal and Social Education have been given top priority. Nevertheless, teacher allocation patterns would still need to be examined.

Policy suggestions 4.4: The Schools Division of the Ministry of Education should use the SACMEQ data to ensure equitable allocation of staff in the different regions and should anticipate the entry of newly-qualified graduates in primary schools and prepare a staffing plan for the equitable deployment of those teachers.

c) Teaching experience

Teachers were also asked about the number of years that they had been teaching. The mean number of years of teaching experience for the reading, mathematics, and health teachers for 2000 and 2007 has been presented in the last three columns of Table 4.2. The figures indicate that in 2007, for Seychelles as a whole, the average pupil had a reading teacher with 15.0 years, a mathematics teacher with12.8 years and a health teacher with 14.2 years of teaching experience. There were moderate regional differences for the three types of teachers. For reading the range was from 10 years in Southern region to 17 years in Western region. For mathematics the range was from 9 years in Northern region to 15 years in Central region. However the range for 2000 and 2007 had narrowed for both the reading and the mathematics teacher and in 2000, overall, reading teachers had considerably more years of experience than those in 2007.

Table 4.2: Professional characteristics of teachers

2000	Level of Academic Education						Years of Teacher Training						Teaching Experience					
	Reading		Mathematic s		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	11.0	0.05	12.8	0,03	xx	xx	3.0	0.03	3.5	0.02	xx	xx	23.3	0.40	10.7	0.30	xx	xx
Eastern	11.8	0.09	11.9	0.07	xx	xx	2.8	0.06	3.0	0.04	xx	xx	26.4	0.03	29.9	0.51	xx	xx
Island	12.3	0,05	12.0	0,05	xx	xx	3.0	0.02	2.6	0.00	xx	xx	9.9	0.05	13.9	0,41	xx	xx
Northern	12.3	0.05	12.3	0.07	xx	xx	2.3	0.66	3.0	0.04	xx	xx	14.7	0.06	10.2	0.64	xx	xx
Southern	12.5	0.00	13.0	0.00	xx	xx	3.0	0.04	3.6	0.02	xx	xx	21.8	0.07	6.7	0.90	xx	xx
Western	11.9	0.00	13.0	0.00	xx	xx	3.0	0..02	3.6	0.01	xx	xx	17.4	0.06	9.4	0.19	xx	xx
SEYCHELLES	**12.1**	**0,02**	**12.6**	**0.02**	**xx**	**xx**	**3.3**	**0.16**	**3.4**	**0.01**	**xx**	**xx**	**20.0**	**0.24**	**12.0**	**0.17**	**xx**	**xx**

2007	Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	11.7	0.35	10.6	0.10	11.7	0.06	3.2	0.04	3.7	0.02	2.7	0.03	16.2	0.44	15.2	0.30	12.7	0.46
Eastern	12.2	0.04	12.2	0.04	12.2	0.04	3.4	0.05	3.4	0.03	2.5	0.05	15.6	0.44	11.9	0.58	12.0	0.56
Island	11.5	0.05	11.0	0.00	11.0	0.00	3.5	0.06	3.4	0.06	2.7	0.09	15.8	0.63	14.9	0.65	13.5	0.64
Northern	12.4	0.05	12.1	0.02	12.1	0.02	2.7	0.07	3.8	0.01	3.3	0.06	13.3	0.63	9.4	0.24	14.2	0.29
Southern	12.2	0.05	11.7	0.05	11.7	0.05	3.8	0.01	3.5	0.02	3.5	0.03	10.1	0.40	11.6	10.4	13.7	0.32
Western	12,6	0.03	12.7	0.00	12.7	0.00	3.0	0.07	4.0	0.00	1.8	0.06	17.0	0.50	10.4	0.22	21.5	0.43
SEYCHELLES	**12.0**	**0.01**	**11.5**	**0.03**	**11.5**	**0.03**	**3.2**	**0.02**	**3.7**	**0.01**	**2.7**	**0.02**	**15.0**	**0.21**	**12.8**	**0.18**	**14.2**	**0.20**

From the results about academic qualification, length of teacher training and teaching experience some of the difficulties with staffing are underlined. The difficulty stems from two main issues: teacher training and teacher supply. With the opening of the University of Seychelles, the Ministry of Education may need to renegotiate its plan to train untrained teachers in the system. The Ministry of Education through the University has began to address the issues of training of teachers in priority areas and in the meantime the Ministry of Education should consider carefully how teachers are allocated to schools. The placement of newly-qualified teachers to schools and the deployment of existing teachers would need to be reviewed in the light of some of the findings from this study.

Policy suggestions 4.5: The Ministry of Education should review its school staffing policy that will take into consideration qualifications, training, age, and gender (where possible) to ensure equitable distribution of teachers in school.

d) In-service courses completed

In-service courses for teachers in Seychelles have taken various forms over the yeas. Previously before the closure of the curriculum section at the Ministry of Education, in-service courses were held in particular subject areas to familiarize teachers with new programmes, to upgrade teachers in specific subject areas and sensitise teachers to pedagogical issues. Later on in-service courses had become rather spurious and tended to be linked to particular projects. With the re-structuring of the Ministry of Education the development of the Centre for Curriculum Assessment and Teacher Support (CCATS) in-service has been renewed. It is necessary for the Ministry of Education to have some idea of the trend in the implementation of in-service courses in order to make policy intervention if necessary as part of the Education Reform.

In the SACMEQ study teachers were asked about their participation in in-services courses during the past three years. They had to indicate the number of in-service courses they had attended and the length of those courses. The mean number of in-service courses and mean number of days the teacher had attended these courses have been calculated and recorded in second to the sixth column of table 4.3 for the reading, mathematics and health teacher for 2000 and 2007. The figures show that in 2007 the average pupils in P6 in Seychelles had a reading teacher who had attended about 2 (mean 2.2, SE .05) in-service courses in the last three years, a mathematics teacher who had attended about 4 (mean 3.9, SE .04), and a health teacher who had attended about two (mean 1.9, SE .04).

However, the number of in-service courses attended by these teachers varied considerably. For example, for the reading teachers in Central the average was about one whilst in Southern region it was almost five times that number. For mathematics the range was wider still, it varied from about one in Eastern region to about 11 in Western. For health teachers variations were not large and ranged from about one in Central to about 3 in Northern region. As has been mentioned above the variation is probably due to the different types of in-service courses. It seems likely that in Western region there had been

specific projects for English and Mathematics and special training sessions had been organized.

If one was to compare the results in 2000 and 2007, it is encouraging to note that the number of in-service courses seemed to have increased albeit slightly for the reading teacher and by almost twice the number for the mathematics teacher.

The number of days of in-service courses attended by teachers also provides further information. The striking fact about the figures for 2007 is that overall, the number of days varied considerably for the three types of teachers – about 34 days for the reading teacher, 11 for the mathematics teacher and 16 for the health teacher. Regional variations seemed to indicate certain anomalies. For example, for reading teachers in Western, Island and Southern regions the number of days was about 40, 81 and 131, respectively. Similarly, for mathematics teachers about 34 days was recorded in the Western region and for health teachers about 93 days in the Southern region. It would appear that when teachers were responding to questions about in-service training, they encountered some problems in taking into consideration the diverse nature of in-service courses. Some of those in-service training were in fact long-term courses. This anomaly seemed more apparent in the data for 2007 than for 2000. However, the data do reinforce the fact that the number and length of in-service courses has increased from 2000 to 2007.

e) Effectiveness of in-service courses

Teachers were also asked to rate the effectiveness of the in-service courses. They were provided with the following options and coding: 'I did not attend any in-service courses'=1; 'Not effective'=2; 'Reasonably effective'=3; 'Effective'=4; 'Very effective'=5. The first option was placed as system missing; the second and third options were collapsed and coded as "not effective", and the last two as "effective". In the last three columns of Table 4.3, the percentage of pupils with teachers who found in-service courses effective has been presented for the reading, mathematics and health teachers for 2000 and 2007.

The findings are generally quite pleasing. In 2007 the majority of teachers who attended in-service courses found the courses effective or very effective. The mathematics teachers were more impressed with their training than the health teacher and the reading teacher. Around 91 percent of pupils had a mathematics teacher who rated the courses as effective or very effective compared to the figure of 76 percent for health teachers and 64 percent for reading teachers. It must be noted that in some regions, such as Northern for reading teachers, Central and Eastern for mathematics teachers, and Eastern again, for health teachers, all pupils had teachers who rated the courses as effective or very effective. Moreover, there has been major improvement in the effectiveness of in-service courses as rated by teachers from 2000 to 2007. These are encouraging signs.

Table 4.3: Teacher in-service courses

2000	Number of In-service Courses						Number of Days In-service						Effectiveness of in-service					
	Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	%	SE	%	SE	%	SE
Central	1.0	0.06	0.9	0.02	xx	xx	4.6	0.31	2.0	0.03	xx	xx	00.0	0.00	100.0	0.00	xx	xx
Eastern	1.5	0.17	1.1	0.09	xx	xx	8.1	1,41	3.5	0.30	xx	xx	89.2	2.80	100.0	0.00	xx	xx
Island	2.3	0.20	2.5	0.05	xx	xx	6.6	0.45	4.2	9.06	xx	xx	20.9	3.30	77.4	2.80	xx	xx
Northern	1.8	0.08	2,2	0.14	xx	xx	26.9	2.10	13.1	1.27	xx	xx	40.4	2.80	80.7	3.40	xx	xx
Southern	4.9	0.34	2.5	0.07	xx	xx	9.7	0.44	5.2	0.29	xx	xx	13.5	2.40	85.2	2.60	xx	xx
Western	0,7	0.00	2.6	0.10	xx	xx	1.8	0.00	10.2	0,21	xx	xx	0.00	0.00	23.6	3.40	xx	xx
SEYCHELLES	**1.7**	**0.50**	**1.7**	**0.03**	**xx**	**xx**	**9.4**	**0.42**	**5.7**	**0.22**	**xx**	**xx**	**27.3**	**1.3**	**76.3**	**1.00**	**xx**	**xx**

2007	Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	%	SE	%	SE	%	SE
Central	1.4	0.06	2.7	0.09	1.2	0.09	4.6	0.22	4.8	.20	2.18	0.16	40.6	1.70	100.0	0.00	73.1	3.30
Eastern	1.7	0.07	0.8	.08	1.9	0.08	7.1	0.58	3.9	0.25	5.9	0.30	54.3	3.00	100.0	0.00	100.0	0.00
Island	2.3	0.11	3.4	.11	1.8	0.00	81.2	5.57	15.3	0.49	4.2	0.34	100.0	0.00	84.4	2.30	82.6	0.00
Northern	3.0	0.09	4.9	.08	3.4	0.10	10.6	0.94	16.4	0.53	6.3	0.17	57.0	2.50	85.9	2.30	47.9	2.90
Southern	1,5	0.10	2.4	0.15	2.6	0.15	131.2	7.65	3.0	0.15	93.8	8.55	80.1	2.30	66.4	1.30	90.1	2.00
Western	4.6	0.29	11.2	0.18	2.0	0.04	30.9	2.20	33.5	0.54	12.6	0.00	79.7	2.30	100.0	0.00	72.4	4.50
SEYCHELLES	**2,2**	**0.05**	**3.9**	**0.04**	**1.9**	**0.04**	**34.4**	**1.21**	**11.2**	**0.14**	**16.6**	**1.00**	**64.7**	**1.00**	**91.2**	**0.6-**	**76.0**	**1.20**

Policy suggestion 4.6: The new Centre for Curriculum, Assessment and Teacher Support (CCATS) should collaborate with the Schools Division at the Ministry of Education and engage in policy discussion about the co-ordination of in-service courses and in the light of the national curriculum activities ensure that there are in-service training opportunities across regions and curricular areas.

4.3 Teacher work time allocation

Teacher effectiveness can also be influenced by some of the conditions the teacher has to work in. Teacher workload is an important area to be examined to ensure that teacher timetable is not overloaded and that teachers have adequate time to prepare and plan their lessons. Two aspects of the teacher workload were studied: the number of hours teachers teach and time for marking and preparation.

a) Teaching hours per week

In Seychelles primary school teachers are expected to teach not more than 30 periods per week (a period is forty minutes). The teachers were asked how many periods/lessons a week they taught, The mean number of periods has been presented in the second, third and fourth column of Table 4.4 for the reading, mathematics and health teachers for 2000 and 2007.

Table 4.4: Teaching hours and lesson preparation

2000	Teaching hours per week						Lesson preparation hours per week					
	Reading		Mathematics		Health		Reading		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	26.6	0.13	28.9	0.12	xx	xx	9.8	0.11	10.1	0.16	xx	xx
Eastern	29.3	0.30	30.1	0.31	xx	xx	16.2	0.43	10.2	0.52	xx	xx
Island	24.8	0.33	29.3	0.00	xx	xx	9.5	0.60	18.1	0.16	xx	xx
Northern	24.7	0.30	26.0	0.14	xx	xx	11.8	0.37	10.2	0.20	xx	xx
Southern	28.6	0.29	31.0	0.04	xx	xx	9.2	0.13	8.5	0.02	xx	xx
Western	26.7	0.09	26.6	0.08	xx	xx	9.3	0.09	10.4	0.16	xx	xx
SEYCHELLES	**26.7**	**0.09**	**28.6**	**0.06**	**xx**	**xx**	**10.9**	**0.11**	**10.8**	**0.10**	**xx**	**xx**

2007	Reading		Mathematics		Health		Reading		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	25.5	0.16	25.5	0.16	22.8	0.31	8.7	0.17	7.1	0.22	4.0	1.16
Eastern	28.3	0.13	28.3	0.13	27.5	0.09	8.0	-.14	7.8	0.35	14.2	0.31
Island	32.2	0.05	32.2	0.05	31.7	0.02	10.4	0.43	11.5	0.26	11.5	0.27
Northern	26.0	0.07	26.0	0.07	24.7	0.00	9.9	0.15	7.0	0.13	9.4	0.08
Southern	25.9	0.24	25.0	0.24	27.7	0.07	8.5	0.28	13.6	0.19	12.4	0.29
Western	27.8	0.09	27.8	0.09	26.0	0.14	17.9	0.19	19.0	0.10	16.8	0.00
SEYCHELLES	**27.2**	**0.06**	**27.2**	**0.06**	**25.9**	**0.10**	**10.2**	**0.09**	**10.1**	**0.10**	**9.8**	**0.00**

It can be seen that in 2007, the number of periods spent teaching corresponded with what was expected in Seychelles. Overall, the mean number of periods was about 27 for the reading and mathematics teacher and 25 for the health teacher. There were some regional

variations worth noting. Teachers in the Central region reported that they taught fewer periods (about 25 for reading and mathematics and 22 for health teachers) whilst teachers in Islands reported that they had more teaching periods (about 32) somewhat above the expected number. However, there was very little difference overall from 2000 to 2007 but it would appear that the situation in the Island region has deteriorated significantly.

b) Lesson preparation hours per week

Teachers were also asked how many hours on average they spent a week working on lesson preparation and marking homework or class work. The information is contained in the last three columns of Table 4.4. In 2007 teachers were spending about 10 hours of their time preparing lessons or marking although the figures for Western region seemed somewhat exaggerated (about 17, 19, and 16 for the reading, mathematics, and health teacher, respectively). In 2000, the high figures were in Eastern region for reading teachers (about 16 hours) and Island region for the mathematics teachers (about 18 hours). However, differences in the overall average for 2000 and 2007 were at a minimum. The findings would suggest that teachers spend considerable time in preparation and marking and that that needs to be taken into consideration in the preparation of the timetable.

4.4 Tests, meeting with parents and reporting

Teachers need to receive feedback on how the children are learning. They need to ensure that learning outcomes are recorded and they need to report to parents. Information about these tasks which form part of the teachers' responsibilities has been presented in Table 4.5. For example, in 2000, in Central region 91 percent and 52 percent of pupils had reading and mathematics teachers, respectively, who reported that they tested the pupils at least two or three times per month; six percent and four percent of pupils had reading teachers, and mathematics teachers, who met with parents at least once or more times a month; ninety-three and 100 percent of pupils had teachers who confirmed that there was a special section for commenting on their respective subjects in the school report; sixty-nine and 91 of pupils had reading and mathematics teachers who asked parents to sign that pupils had completed homework assignments. It is to be noted that data was not collected for the health teachers in 2000.

a) Frequency of testing

The figures in the second, third and fourth column of Table 4.5 indicate the percentage of pupils who were given written tests by the reading, mathematics and health teachers in 2000 and 2007. Around 31, 36 and 24 percent of pupils were given written test by the reading,
mathematics and health teachers, respectively. There were notable variations in frequency of testing across regions for all three subject areas. For example, the range for reading teachers was from about 10 percent in Western and 40 percent in the Central region. Mathematics and

Table 4.5: Tests, meeting with parents and reporting

2000	Frequency of test						Frequency of meeting parents						Special Section for reporting						Parent sign homework					
	Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	91.2	0.00	52.3	1.40	××	××	6.5	1.00	4.7	0.80	××	××	93.3	1.00	100.0	0.00	××	××	69.0	1.5	91.2	0.00	××	××
Eastern	100.0	0.00	35.1	2.10	××	××	0.0	0.00	0.0	0.00	××	××	77.4	2.50	71.9	0.00	××	××	87.7	2.1	100.0	0.00	××	××
Island	65.9	0.00	65.9	0.00	××	××	0.0	0.00	0.0	0.00	××	××	84.8	2.30	100.0	0.00	××	××	84.8	2.30	65.9	0.00	××	××
Northern	74.9	2.60	45.9	2.30	××	××	5.4	1.10	0.0	0.00	××	××	100.0	0.00	100.0	0.00	××	××	80.8	2.10	86.3	1.80	××	××
Southern	49.5	0.00	61.4	2.20	××	××	11.6	2.00	0.0	0.00	××	××	100.0	0.00	100.0	0.00	××	××	9.8	1.70	12.0	2.20	××	××
Western	100.0	0.00	46.0	2.70	××	××	0.0	0.00	19.0	0.00	××	××	100.0	0.00	19.0	0.00	××	××	65.0	2.70	65.7	2.70	××	××
SEYCHELLES	**83.0**	**0.40**	**50.7**	**0.80**	**××**	**××**	**4.6**	**0.50**	**3.9**	**0.30**	**××**	**××**	**93.0**	**0.00**	**94.0**	**0.00**	**××**	**××**	**67.7**	**0.80**	**76.5**	**0.50**	**××**	**××**

2007	Frequency of test						Frequency of meeting parents						Special Section for reporting						Parent sign homework					
	Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health		Reading		Mathematics		Health	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	40.0	1.50	59.5	1.5	30.7	1.3	10.8	1.2	35.5	1.20	21.2	0.80	84.8	2.00	100.0	0.00	85.1	0.90	89.8	1.20	80.8	1.50	65.5	1.20
Eastern	12.6	2.20	00.0	0.00	00.0	0.00	25.4	2.8	00.0	0.00	49.2	3.50	100.0	0.00	100.0	0.00	100.0	0.00	78.1	2.70	70.4	2.60	88.3	2.10
Island	33.8	0.00	63.7	0.00	33.8	0.00	26.9	2.8	12.3	2.10	53.2	2.80	100.0	0.00	100.0	0.00	100.0	0.00	72.5	2.80	75.4	2.00	63.7	0.00
Northern	61.5	0.00	46.1	1.9	56.9	0.00	14.0	1.7	01.4	0.00	1.40	0.00	100.0	0.00	100.0	0.00	100.0	0.00	79.7	1.70	46.3	0.00	58.5	1.70
Southern	15.2	2.50	00.0	0.00	00.0	0.00	27.0	2.8	30.3	2.80	13.5	2.40	100.0	0.00	100.0	0.00	100.0	0.00	57.9	2.5	42.7	0.00	57.9	2.50
Western	10.6	0.00	10.6	0.00	10.6	0.00	00.0	0.00	00.0	0.00	00.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	68.0	2.5	49.5	0.00	68.0	2.50
SEYCHELLES	**31.6**	**0.70**	**36.3**	**0.6**	**24.3**	**0.00**	**16.0**	**0.80**	**17.1**	**0.60**	**22.9**	**0.70**	**98.0**	**0.30**	**100.0**	**0.00**	**100.0**	**0.00**	**77.8**	**0.80**	**65.1**	**0.70**	**66.9**	**0.70**

health teachers in Eastern and Southern regions gave no written tests. Besides, there was a major problem with regard to testing. The overall figures had gone down drastically for reading by about 52 percentage points and notably for mathematics by about 14 percentage poins. This problem will need to be addressed and some guidelines should be provided to teachers about the frequency of testing.

***Policy suggestions 4.7*:** CCATS should provide guidelines about assessment and testing at school level and should provide teachers with the support to develop and use appropriate tests. They should also monitor assessment practices in the school to ensure that pupils are tested regularly in all subject areas.

b) Frequency of meeting with parents

The figures in columns four, five, and six of Table 4.5 are indicators of some aspects of parental involvement. Questions were asked to teachers about the frequency of meeting with parents to discuss pupil performance and related matters. There were four options: 'Never', 'Once year', 'Once a term' and 'Once or more a month'. A first analysis of those responses in 2007 indicated that almost all pupils had teachers who met with parents once a term. Since this would usually be associated with open days when parents have the opportunity to discuss the end of term report, it was decided that the responses of 'Once or more a month' would provide a better indicator of the willingness of teachers to meet with parents.

The percentage of pupils who had teachers who met with parents once or more a month has been tabulated for the reading, mathematics and health teachers for 2000 and 2007. On average, in 2007 about 16 and 17, and 22 percent of pupils were taught by reading, mathematics, and health teachers who said that they met with parents once or more a month. For a quarter of the pupils in Western, Eastern and Island regions the reading teacher met with parents at least once a month whilst about one-third of the pupils in Central and Southern regions had mathematics teachers who met with parents once or more a month. Moreover, about half of the pupils in Eastern and Island regions had health teachers who met with parents at least monthly.

These results would indicate that whilst teachers were meeting with parents as part of the open day activities every term, there was a wide range of differences in the frequency with which the three types of teachers met with parents and that a large majority of pupils (if not all) in some regions such as Northern and Western (reading, mathematics and health teachers), Eastern and Southern (mathematics teachers), and Central (reading teachers) the teachers did not meet their parents on a more frequent basis except on the statutory open days. However, the situation had improved considerably from 2000 to 2007 and one can assume that these results are related to the emphasis which the Ministry of Education has been placing on parental involvement especially in the primary school.

***Policy suggestion 4.8*:** The Ministry of Education should strengthen school policy on parental involvement through the newly established School Council.

c) Special section for reporting subject

It is standard practice to have a section in the school report for each pupil to show his or her performance in the school subjects. Primary 6 teachers for reading, mathematics and health were asked if the school report for each pupil included a specific section for comments on their subjects, specifically English, Mathematics and Health/Life Skills. They had to answer 'Yes' or 'No'. The percentage of pupils in schools where this practice existed has been presented in columns seven, eight, and nine of Table 4.5 for reading, mathematics and health teachers. The information in the table shows that all school reports have a section for English, Mathematics and Health/Life Skills with the exception of some schools in Central region according to the reading and health teachers there. This situation in those two regions needs to be further investigated.

d) Parent sign homework

Another aspect of parental involvement is related to homework as it was reported in chapter 3. For this indicator a question was posed to teachers:
'Do you ask parents or guardians to sign that pupils have completed their home assignments?'
To which teachers had to answer yes or no.

The percentage of pupils whose teachers said 'Yes' has been presented in the last three columns of Table 4.5. In 2007 about three-quarters of the pupils had reading teachers who asked their parents to sign homework, and one-third for both mathematics health teachers. There were some notable variations amongst regions. Southern region registered the lowest figures, about 57 percent according to the reading and health teachers and 42 percent according to the mathematics teachers. Central registered the highest with 90 percent according to the reading teachers and 81 percent according to the mathematics teachers. On the other hand, Eastern registered the highest, 88 percent, according to the health teachers. When the results for 2000 and 2007 are compared, it can be found that the overall percentage of pupils with reading teachers who ask parents to sign the completion of homework assignments has increased by about 10 percent whilst that for mathematics has decreased also by about 10 percent. These findings would seem to suggest that although teachers in individual schools are ensuring that parents sign homework assignment, there is no general policy regarding this practice.

Policy suggestions 4.9: The Ministry of Education should ensure that school policy on homework includes the necessity for parents to sign homework assignments.

4.5 Teacher professional support

The provision of curriculum resources for teachers has been problematic in the education system of Seychelles. The Ministry of Education has made plans to develop centres in the different education regions or zones. Unfortunately, these plans have not been fully implemented. With the new reform and restructuring of the Ministry of Education attempts are being made to develop a main resource centre at the Ministry of Education and one or two others specifically in the Island region. Just the same, there are also certain well-resourced schools particularly in the South which are used by other schools as resource centres.

a) Visit to education resource centres

In the SACMEQ questionnaire, teachers were asked whether they had visited the education resource centre which served their particular school. The SACMEQ II data indicated that all teachers chose the response option: 'There is no education resource centre'. In SACMEQ III some teachers indicated that they visited the education resource and Table 4.5 contains information referring to the SACMEQ III data and the percentage of pupils with reading, mathematics and health teachers who said that they visited the education resource centre.

Table 4.6: Percentage of pupils with teachers visiting resource centres

Regions	2007					
	Reading		Mathematics		Health	
	%	SE	%	SE	%	SE
Central	29.9	1.50	56.3	1.50	56.8	1.90
Eastern	66.3	1.70	66.0	2.20	66.3	1.70
Island	36.3	0.00	36.3	0.00	36.3	0.00
Northern	42.7	0.00	1.40	0.00	42.4	1.70
Southern	29.8	1.70	0.00	0.00	21.3	0.00
Western	8.6	1.60	20.7	0.00	20.7	0.00
SEYCHELLES	**34.9**	**0.60**	**35.8**	**0.60**	**44.5**	**0.70**

It can be seen that on average for Seychelles only a minority of teachers used the resource centres. About one-third of pupils had reading and mathematics teachers who used the resource centre. The health teacher on the other hand tended to use more – almost half of the pupils had teachers who used the resource centre. Regional variations were quite notable. For reading teachers in Western region the figure was only about 8.6 percent compared to Northern with a figure of about 42 percent. For mathematics teachers there were two regions Northern and Southern were none of the pupils or very few of them (about 1 percent) had teachers who visited the resource centre. For health teachers the figures varied from around 20 percent in Southern and Western regions and 66 percent in the Eastern region. These results reflect the difficulty which is being experienced by the Ministry of Education to develop appropriate education centres to support teachers. This will become clearer in the next section.

b) Use of education resource centre

Teachers were also asked to answers 'Yes' or 'No' if they have used the education centre for the activities listed in the first column of Table 4.7. The percentage of pupils with reading, mathematics, and health teachers who use the resource centre for those various activities have also been tabulated. For example about 20 percent, 24 percent and 31 percent, of pupils had reading, mathematics and health teachers, who used the education resource centre to 'Look at teaching and training materials'.

Table 4.7: Percentage of pupils with teachers using the resource centres

Activities	2007					
	Reading		Mathematics		Health	
	%	SE	%	SE	%	SE
Look at teaching/training materials	20.8	0.50	24.2	0.30	31.7	0.60
Borrow teaching/training materials	30.1	0.60	25.8	0.50	36.3	0.70
Make teaching/training materials	7.0	0.03	10.8	0.50	19.6	0.60
Attend training courses	6.5	0.30	15.2	0.70	12.6	0.50
Exchange ideas with teachers from other schools	8.7	0.40	15.3	0.70	13.8	0.50
Seek advice from staff of the resources centre	12.9	**0.50**	22.4	**0.70**	**16.6**	**0.40**

It is clear from the table that teachers tended to use the resource centre to find out what materials and resources were available and to borrow some of them. About one-quarter of the pupils had reading and mathematics teachers who used the resource centre for that purpose and just over one-third of the pupils had health teachers who use the centre to look at teaching training materials and borrow. It would appear that it is mostly the health teachers who use the centre to make training or teaching materials (the figure is almost twice that of the other teachers). It is interesting to note that some teachers, although a small minority, particularly mathematics and health teachers (the figure is about 22 and 16 percent, respectively) used the centre to exchange ideas and seek advice. However, it was disappointing to find out that the centres were not used very much for training. Only about 6 percent, 15, and 12 percent of pupils had reading, mathematics and health teachers, respectively, who visited the centre to attend training sessions. Perhaps this matter about resource centres may be taken up by the setting up of a professional body for teachers - the Teachers' Council.

***Policy suggestion 4.10*:** The Ministry of Education should seek funding to develop professional resource centres for teachers in each region

c) School head advice teachers

One of the major tasks of the school head is to advise teachers on their teaching. Teachers were asked how often their school heads advised them on their teaching. The response options were as follows: 'Never', 'Once a year', 'Once a term', 'Once or more a month'. The percentage of pupils in schools where the reading, mathematics and health teachers reported that that the school head advised them once or more a month has been presented in Table 4.8. For example, in the Central region in 2000 about 3 percent and 15 percent of

pupils had teachers who said that they received advice from their school heads at least once a month. Note that data was not collected for health teachers in 2000.

Table 4.8: Teachers getting advice from school heads

2000						
	Reading		Mathematics		Health	
	%	SE	%	SE	%	SE
Central	02.9	1.40	15.0	0.00	xx	xx
Eastern	00.0	0.00	00.0	0.00	xx	xx
Island	09.8	1.80	00.0	0.00	xx	xx
Northern	14.0	1.70	39.6	2.60	xx	xx
Southern	49.5	0.00	69.0	2.60	xx	xx
Western	25.7	0.00	65.0	2.70	xx	xx
SEYCHELLES	**22.5**	**0.60**	**27.8**	**0.60**	xx	xx

2007						
	Reading		Mathematics		Health	
	Mean	SE	Mean	SE	Mean	SE
Central	44.4	2.00	59.9	1.90	63.0	1.80
Eastern	37.3	2.20	49.0	2.60	45.6	0.00
Island	87.7	2.10	57.9	2.10	57.7	2.10
Northern	43.1	0.00	46.3	1.50	43.1	0.00
Southern	60.4	3.50	36.5	2.50	78.1	1.30
Western	49.5	0.00	80.0	1.60	31.3	0.00
SEYCHELLES	**51.5**	**0.90**	**56.0**	0.90	**58.6**	**0.70**

Overall, in 2007 there was reasonable consistency between the three types of teachers on the frequency with which they received advice from their school heads. More than half of the teachers with figures denoting that 51 percent, 56 percent, and 58 percent of pupils had reading, mathematics, and health teachers who received advice from their school heads once or more a month. There were considerable variations within regions with figures ranging from about 50 – 80 percent for the reading and mathematics teachers and 30 to about 80 percent for the health teacher. When the results for 2007 are compared with those of 2000, it is encouraging to note that there has been a considerable increase in the number of teachers receiving advice from their school heads at least once a month. The overall figure has doubled. Many of school heads have been following a management course and curriculum leadership as a topic was much emphasized. However, it also obvious that some school heads in some regions may not be advising teachers as often as others. It may be necessary for the Ministry of Education to ensure that all school heads make this task one of their priorities.

4.6 Conclusion

The presentation in this chapter has focused on the characteristics of teachers and explored aspects of the teaching learning environment. From the results it is quite clear that although teachers are applying to their tasks quite satisfactory, there were some system level

adjustment that needs to be thought about to make the teaching learning environment more effective and several policy suggestions have been made to improve the quality of the teaching learning environment.

The analysis of the teacher characteristics leads to a critiques of staff allocation and deployment. The supply, training, and recruitment of teachers have all received continuous attention by the Ministry of Education. However, an adequate supply of qualified teachers to degree level in primary schools has not been achieved although there are new structures which need to be effectively implemented. In addition, within the constraints of teacher availability, the Ministry of Education also needs to ensure an equitable distribution of teachers in schools.

Two main issues emerge from the information on the teaching environment. The first is that teachers are working within the expected time allocation although some consideration needs to be given to preparation and marking time. Also, there has been substantial improvement in teachers meeting with parents and getting parents involved in checking their children's homework. However, it was shown that the frequency of testing was rather erratic and that guidelines and procedures need to be established.

The second issue is much broader, and it refers to facilitating conditions that support and motivate teachers. Although it was found from the results that teachers were using resource centres, a situation which was very different from that in 2000, there may be a need to develop these centres and perhaps to build more centres so that teachers will not only borrow materials but use these centres as focal points for teacher support and development.

The data presented in this chapter have shown much improvement compared to the data for the SACMEQ II study. It is hoped that some of the suggestions made in this chapter will help to maintain to progress that have been made.

Chapter 5
Characteristics of School Heads and their Schools

5.1 Introduction

Educational leadership and questions concerning the characteristics of the school head has been a dominant concern in educational systems. Research has linked the effectiveness of schools to the leadership skills of the school head and associated the leadership of the school head with quality learning and teaching. However, defining the qualities and ideal characteristics of a school head has been a challenging task for policy makers. In Seychelles, the criteria for the selection of school heads have not been formalized, but they include teaching experience and teaching qualifications. Moreover, those teachers who have shown commitment to education and who have made contributions to public life will have a better chance to be promoted to the position of school heads. More recently, most school heads had completed a Master's course in school management and with the recent developments in line with the Education Reform decision makers are re-assessing the role of the school head and the procedures for selection and appointment. In this chapter data describing the school head characteristics and the schools in which the Primary 6 pupils found themselves, from the SACMEQ II and SACMEQ III studies, have been presented.

5.2 Personal characteristics of school head

Age and gender are some of the personal characteristics which need to be considered in the appointment of school heads. It is necessary to find out how best to maintain a balance between older and younger, and male and female school heads, and planners must have an overview of the situation to be able to make informed decisions. The information provided in Table 5.1 for the six education region in Seychelles for the year 2000 and 2007 have been reported in terms of the pupil. Thus, in 2000 in the Central region the average pupil had a school head who was 44.8 years of age and 100 percent of the pupils had a female school. Similarly, in 2007, the average pupil had a school head who was 46.9 years of age and 68 percent of the pupils had a female school head.

Table 5.1: Age and gender of school heads

Regions	2000				2007			
	Age in years		Gender female		Age in years		Gender female	
	Mean	SE	%	SE	Mean	SE	Mean	SE
Central	44.8	0.00	100.0	0.00	46.9	0.00	68.3	0.00
Eastern	45.4	0.00	100.0	0.00	48.3	0.00	100.0	0.00
Island	47.2	0.00	100.0	0.00	54.6	0.00	100.0	0.00
Northern	47.0	0.00	100.0	0.00	50.7	0.00	100.0	0.00
Southern	48.6	0.00	100.0	0.00	52.0	0.00	100.0	0.00
Western	39.3	0.00	49.5	0.00	50.9	0.00	49.5	0.00
Seychelles	**45.3**	**0.00**	**94.0**	**0.00**	**49.8**	**0.00**	**82.8**	**0.00**

a) Age distribution of school head

In Table 5.1 (columns 2 and 5) there is information about the age of school heads in primary schools in Seychelles in 2000 and 2007. Overall for 2000, the mean age was 45.8 with some variations amongst regions. The average pupil in the Western region had the youngest school head (mean 39.3) and those in the Island had the oldest (mean 47.2). When the figures in 2000 are compared to those in 2007, it can be seen that the mean age of school heads have increased overall by almost five years whilst the range amongst regions have remained very much the same and pupils in the island region still had the oldest school head (mean 54.6). These results would seem to indicate that school heads were getting older and, in that context, the Ministry of Education may need to make long term plans to recruit younger teachers to become school heads.

b) Gender distribution of school heads

In columns three and five of Table 5.1 information on gender has been presented. It can be gleaned from the table that an overwhelming majority of school heads were female. In 2000, over ninety-four percent of pupils had female school heads and schools in all regions with the exception of Western region (with a figure of about 49 %) had female school heads. By 2007, a small improvement can be detected in gender balance. The overall average figure had decreased by about 12 percent and in one other region, that is, Central, a more equitable gender balanced could be discerned with 68 percent of pupils in schools with a female school head. It is fair to conclude that although female school heads were still predominant in the primary school system of Seychelles attempts were being made to appoint men as heads as evidenced in Central region.

5.3 Professional characteristics of school heads

In the Education Reform school heads have been given more autonomy to lead and manage schools (Department of Education, 2010) and with this increasing climate of accountability, there is a need to re-examine the professional characteristics of school heads. Standards relating to academic qualification, training, experience and certain conditions about teaching duties should be established to provide informed and acceptable standards to recruit and select school heads. In Table 5.2 information about the professional characteristics of school heads in the SACMEQ II and SACMEQ III studies has been presented for the six education region in Seychelles. As mentioned earlier, the statistics have been reported in terms of the pupils. For example, In Central region about 28 percent of pupils were in schools in which the school head had done some further study, eighty-five percent in which the school head had had three or more years of teacher training; the average pupil had a school head with 28.3 years of teaching experience, 11.6 years of experience as school head, and about sixty-six percent of pupils had school heads who had attended training in school management, and teach less than one period a week.

a) Level of academic education

The second column of Table 5.2 contains information on the academic education of school heads. The school heads were asked to indicate their level of academic qualification by ticking one of the following options: 'Primary Education', 'Junior secondary education or equivalent', 'Senior secondary education or equivalent', 'A-level or some further study, but not a degree', 'Tertiary education (at least a first degree)'. The last two responses were combined and the percentages of pupils with a school head who had done at least A-level or some further studies have been presented.

Table 5.2: Professional characteristics of school heads

2000	Academic Education		Teacher Training Yrs		Teaching experience		School head experience		Management training		Teaching periods	
	%	SE	%	SE	Mean	SE	Mean	SE	%	SE	Mean	SE
Central	28.6	0.00	85.0	0.00	28.3	0.00	11.6	0.00	66.1	0.00	0.2	0.00
Eastern	100.0	0.00	49.0	0.00	27.6	0.00	11.4	0.00	71.9	0.00	8.2	0.00
Island	79.3	0.00	54.9	0.00	31.5	0.00	3.4	0.00	79.3	0.00	4.1	0.00
Northern	73.1	0.00	73.1	0.00	29.6	0.00	6.5	0.00	100.0	0.00	2.9	0.00
Southern	100.0	0.00	78.3	0.00	31.0	0.00	7.8	0.00	100.0	0.00	8.9	0.00
Western	100.0	0.00	88.3	0.00	20.0	0.00	5.4	0.00	11.7	0.00	0.1	0.00
Seychelles	**61.8**	**0.00**	**74.5**	**0.00**	**28.1**	**0.00**	**8.7**	**0.00**	**71.8**	**0.00**	**3.2**	**0.00**

2007	Academic Education		Teacher Training		Teaching experience		School head experience		Management training		Teaching periods	
	%	SE	%	SE	Mean	SE	Mean	SE	%	SE	Mean	SE
Central	85.5	0.00	85.9	0.00	27.5	0.00	9.4	0.00	90.1	0.00	5.9	0.00
Eastern	75.6	0.00	75.8	0.00	28,8	0.00	4.3	0.00	75.8	0.00	0.0	0.00
Island	36.3	0.00	36.3	0.00	38.7	0.00	10.4	0.00	70.1	0.00	1.8	0.00
Northern	61.9	0.00	75.2	0.00	33.3	0.00	9.8	0.00	86.7	0.00	1.4	0.00
Southern	100.0	0.00	42.7	0.00	34.2	0.00	8.4	0.00	42.7	0.00	1.4	0.00
Western	49.5	0.00	81.8	0.00	28.1	0.00	9.1	0.00	81.8	0.00	1.3	0.00
Seychelles	**70.5**	**0.00**	**70.8**	**0.00**	**30.9**	**0.00**	**8.7**	**0.00**	**78.3**	**0.00**	**2.7**	**0.00**

In 2007, around three-quarters of the pupils had school heads who had obtained at least an A-level qualification or had done some further studies. However, there were some regional variations. For example, in Sothern region all the pupils were in such schools; in Island region only about one-third and in Western region about half of the pupils were in that kind of school. Overall, there has been an increase in the number of school heads with at least A-level or some further study qualification from 2000 to 2007 – a rise of about 10 percentage points in the figures.

These findings seem to suggest that school heads have different levels of academic qualification and there were still a number of school heads who were not at the level expected. According to the teacher scheme of service (which is being revised), the pre-requisite qualification for school heads was a first Degree or Higher National Diploma (HND). When a more detailed analysis of the data was carried out, it was found that there has been a huge increase in the number of school heads with a first degree from 2000 to

2007. By 2007 there were about 70 percent of pupils with school heads with at least a first degree compared to about 10 percent in 2000. This rise is probably a result of the successful completion by school heads of the Master' Degree in Educational Management course that was set up specifically for them. Further comment will be made later in this section but as it was mentioned in the previous chapter, degree courses for teachers, especially primary teachers have been initiated by the University of Seychelles. The Ministry of Education should also consider aspiring school heads to follow a degree course as part of the effort to increase the level of academic education of school heads.

b) Years of teacher training

School heads were asked about pre-service teacher training. They had to say whether they have had no training, whether they had training lasting less than one-year, one year, two years, three years, and more than three years. For the purpose of this analysis the last two options have been merged and the figures displayed in the third column of Table 5.2 for the year 2000 and 2007 are the percentage of pupils whose school heads had three or more years of teacher training.

Overall, in the year 2007, seventy percent of the pupils had a school head with three years or more of training. This figure varied amongst regions and in Island region only around one-third of the pupils had school heads with three or more years of teacher training. This is very different from the situation in Central and Western region where over eighty percent of the pupils were in schools with school heads who had three or more years of teacher training. There was a slight decline in the overall figures (about 5 percentage points) from 2000. Although the figure is rather small it would be worrying if that trend continued. As we mentioned in Chapter 4, the length of teacher training has varied over the years but a four-year course has now been established. We would expect the older school heads to have been through teacher training programmes which lasted less than three years – as it was mentioned above the school head population is much older than one would wish. But in the future we would anticipate that the older school heads will be replaced by younger ones, and we would expect more head teachers to have three or more years of teacher training.

c) Teaching experience

Teaching experience is one of the criteria used for selecting teachers. It is assumed that a certain level of experience as a teacher is necessary for a person to be effective in managing and providing leadership to the whole school community. In the fourth column of Table 5.2 information for the year 2000 and 2007 is given on the number of years the school heads had been teachers. Overall, in 2007, the average Primary 6 pupil had a school head who had been teaching for around 30 years. This figure is fairly consistent amongst regions and not very different from that of the year 2000. What is striking about these figures relating to teaching experience is that they seemed rather high. Perhaps they reflected the criteria used to select primary school heads. It may be necessary in the reviewed teacher scheme of service to stipulate a minimum level of teaching experience so as to facilitate the recruitment of younger school heads.

d) Experience as a school head

Information is also provided in Table 5.2 (column 5) on the number of years that school heads have been in their current position. It can be seen that overall for 2007, the average pupil had a school head who had been in his or her current position for about 8.7 year. There were some differences between regions. The most noticeable is the Eastern region where the mean was 4.3 which is about half that for the Island region . The overall mean was the same for 2000 and the range was very similar. If one were to match the results concerning experience of school heads and the number of years teaching one can deduce that the school heads in 2007 are more or less the same ones as in 2000 with one or two senior teachers appointed as school heads. These results reinforce the suggestion made above about the need for younger school heads.

Policy suggestions 5.1: The Ministry of Education should take into consideration the results regarding the professional characteristics of school heads and review the regulations and procedures for the recruitment, selection and deployment of school heads.

e) Special training on school management

School heads were asked if they had received specialised training in school management and in the sixth column of Table 5.2 the percentage of pupil with school heads who had followed a management course have been reported for 2000 and 2007. In 2007, more than three quarters of pupils were in schools in which the head had followed school management training. However, in Southern region there was only around 40 percent of pupils while in Central region there was about 90 percent. Thus one can note considerable variations amongst regions. Although the overall percentage figure has increased by about seven percent points from 2000, Southern seemed to have suffered a severe lost of school heads with management training – the figures been reduced by more than half from 2000 to 2007.

It seems evident from these results that a large majority of school heads have received specialised management training. This training is most probably the Master's Degree in Educational Leadership. When the number of days of training was calculated, the mean value was about 250 days which would correspond roughly with the two year programme. This programme was a new initiative by the Ministry of Education and partners from international universities. It served two purposes: It brought school heads academic qualification to degree level and it provided educational leadership and school management training for school heads or senior teachers. There may be a need to review the provision of this programme to ensure that all school heads has the necessary academic level and school management training.

***Policy suggestion 5.2*:** The Ministry of Education should collaborate with the University of Seychelles to identify appropriate courses to continue to upgrade the level of school heads in primary schools and plan school management training courses.

f) School head teaching hours per week

School heads were asked to indicate the number of periods they taught per week. This information is shown in the last column of Table 5.2 for 2000 and 2007. In 2007, the average pupil had a head teacher who taught about three periods per week. What seemed surprising was that in the Eastern region school heads did not teach at all whilst in Central regions the mean value was about six periods. In the school head's job description, it is stipulated that the school head should teach a minimum of five periods a week. From the data, it is clear that some school heads are opting not to teach whilst others are teaching well beyond the expected number of periods, and although the mean value overall for 2000 and 2007 were very much the same, the differences between regions were much wider in 2000 - from a high of about nine to a low of almost zero. School heads feel that administrative and disciplinary duties limit the time available for teaching. However, it remains important to reconsider the teaching commitment of school heads.

Policy suggestions 5.3: Within the Education Reform plan, the Ministry of Education should review the job description of school heads and reinforce the minimum teaching time.

5.4 School activities

There are certain activities in the school which are not under the school heads control, on the other hand the influence of the school head in the promotion of a range of activities in the school and the reduction of pupil and staff behavior which are detrimental to teaching and learning in the school are indicators of the leadership qualities of the head to promote a vibrant, cohesive and effective school. This information may be used by education planners to monitor the implementation of present policies or to develop relevant policy interventions. In this section, three pieces of information such as official school days lost, visits by inspectors, and provision of school meals have been provided. Moreover, data relating to activities such as contacts with the community, the management of teacher and pupil behavior problems and the situation about the use of the school library are analysed.

a) School days lost

School heads were asked about the number of official school days that was lost in the last school year as a result of disruptions caused by factors beyond their control. The results indicated that for the year 2007, no days were lost due to natural or social calamities. These results are comforting when compared to those of 2000 when an average of about four days was recorded. A high of about 10 days was registered in the Northern region and in Eastern and Island region there were no days lost. Hopefully the results for 2007 will be

maintained and the good fortune of having no such disruptions to the school days will continue.

b) School meals

School heads were asked if there was a school feeding programme or nutrition programme for pupils at their schools during the school year. The school heads indicated whether there was one meal or snack a day or two or more meals a day. In 2007 only 2 percent of pupils in the Northern region had a school head who said that one meal a day was provided.

In Seychelles there is a national school meal scheme which provides school lunch. These meals are not free but generously subsidized by the Ministry of Education. Some student and staff can avail themselves of this meal. However, the number of persons taking those meals has to be established at the beginning of each term when payment is made. It would appear that in 2000 the school heads were probably referring to those subsidized lunches when it was reported that about half of the pupils were having school meals.

However, there is a special fund allocated to the school for pupils whose parents are experiencing dire social or economic difficulties. This fund is used as necessary for individual pupils and it can also be used to pay for lunch for those pupils. In that context it can be assumed that the school heads in 2007 were referring to that kind of assistance with school lunch for that very small number of pupils (2 %). Just the same, this situation may need to be clarified by the Ministry of Education so that an accurate estimate can be made for pupils who are making use of this special fund for lunch during school days.

c) School inspections

The position of the school system in Seychelles in relation to inspection was also examined in 2000 and 2007. School heads were asked to indicate the last year their schools were inspected. The response options were, ‘Never’, ‘Before 2003’, ‘2004’, ‘2005’, ‘2006’ and ‘2007’. For the SACMEQ II survey in 2000 all the school heads reported that their school had never had a full inspection. Therefore, the information in Table 5.3 is for the SACMEQ III survey only.

The results from Table 5.3 provide and indication of the difficulty that the Ministry of Education was having with the development of an inspectorate system. In the second column it can be seen that there were still some schools which have not been inspected. Schools in Eastern and Sothern regions have never undergone a full inspection and in Central and Island regions one-third of the pupils were in schools which had not been inspected whilst in Western region there were about 18 percent of pupils who were in schools which had not had an inspection.

The Ministry of Education introduced a Quality Assurance system in 2000. However, it took some time for a framework to be developed. By the year 2001 selected schools were

inspected. This is evident from the data 'Before 2003' from which it can be seen that in Northern and Western region about half of the pupils were in schools which had been inspected and in Central region a figure of around 19 percent was registered.

Table 5.3: School inspection

2007	Never		Before 2003		2003		2004		2005		2006		2007	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	34.5		19.8		00.0		31.7		00.0		0.0		14.1	
Eastern	00.0		00.0		00.0		45.6		00.0		54.4		00.0	
Island	33.8		00.0		00.0		00.0		29.9		00.0		36.3	
Northern	18.3		49.1		00.0		00.0		00.0		32.6		00.0	
Southern	00.0		00.0		00.0		21.3		00.0		00.0		78.7	
Western	18.2		50.5		31.3		00.0		00.0		00.0		00.0	
Seychelles	**21.0**		**20.3**		**4.1**		**19.5**		**04.0**		**12.4**		**18.7**	

The plan to complete the visits to all the schools over two years had to be abandoned due to human resource constraints. This is evident from the data for '2003', only about one-third of the pupils in Western region were in schools which had a full inspection. The situation improved somewhat for '2004' with an overall average figure of 19 percent and with schools being inspected in three regions, Central (31%), Eastern (45%) and Southern (21%). Regrettably, in '2005' the situation returned to that of 2004. However, it picked up and the mean percentage figures began to increase again from 12 percent in 2006 to 18 percent in 2007. However, The Ministry of Education realized how important it was to have an independent inspectorate system and with the Education Reform in 2010 a fully functioning Inspection Unit has been set up.

***Policy suggestion 5.4*:** The Ministry of Education must ensure the functioning of the new inspectorate system so that by 2013 all schools would have undergone at least a first round of full inspection.

5.5 Community contributions to school activities

Research has highlighted the importance of linking school with parents and the community. Although there has been a tendency for the Ministry of Education to attempt to make **all** provisions for schools in the spirit of social justice, there has been a gradual shift in the position of the Ministry towards community participation in and community contribution to school life. In this section the status and trend in forging community linkages with schools will be assessed.

The school heads were presented with 14 activities which they had to endorse or not endorse depending on whether there was community participation. The 14 activities included: building of schools, maintenance and repair work, purchasing of teaching learning materials such as textbooks, purchasing of stationery and other school supplies, involvement in staff payment, contribution to extra-curricular and teaching activities, and contribution to the provision of school meals.

Information on these activities is contained in Table 5.4 for the six education region for the year 2000 and 2007. For example, in 2000, in Central region there was no pupil in schools in which the school heads indicated that parents or the community contributed to the maintenance of school facilities or the construction, maintenance, and repair of furniture; about 9 percent of pupils were in schools where the school head said that there was contribution towards the purchase of textbooks, about 86 percent towards the purchase of stationery, 58 percent for extracurricular activities; there was no pupils in schools in which the head said that community members or parents assisted in teaching, and about 52 percent of pupils were in schools with school heads who said that parents or community members made some provision for school meals.

In 2007, there were community participation in all the activities except the purchase of textbook. This is understandable as the Ministry of Education's policy was to provide all textbooks. For some activities, in particular extra curricular activities and to some extent the purchase of stationery, community contributions were very high with about 82 percent and 67 percent respectively of pupils whose heads reported such contributions.

Table 5.4: Community contributions to school activities

2000	Maintenance of school facilities		Construction maintenance repair furniture		Purchase of text books		Purchase of stationery		Purchase other school supplies		Extra curricular activities		Assist teachers in teaching		Provision of school meals	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	00.0	00.0	00.0	00.0	8.8	00.0	85.7	00.0	42.9	00.0	58.0	00.0	00.0	00.0	51.7	00.0
Eastern	00.0	00.0	00.0	00.0	49.0	00.0	100.0	00.0	77.1	00.0	51.0	00.0	00.0	00.0	51.0	00.0
Island	00.0	00.0	00.0	00.0	00.0	00.0	34.1	00.0	00.0	00.0	79.3	00.0	00.0	00.0	65.9	00.0
Northern	00.0	00.0	00.0	00.0	33.3	00.0	73.1	00.0	45.5	00.0	100.0	00.0	00.0	00.0	39.8	00.0
Southern	00.0	00.0	00.0	00.0	50.5	00.0	78.3	00.0	27.7	00.0	78.3	00.0	00.0	00.0	27.7	00.0
Western	67.0	00.0	55.3	00.0	55.3	00.0	86.0	00.0	67.0	00.0	74.3	00.0	00.0	00.0	74.3	00.0
Seychelles	**7.8**	**00.0**	**6.4**	**00.0**	**27.9**	**00.0**	**79.2**	**00.0**	**44.4**	**00.0**	**70.8**	**00.0**	**00.0**	**00.0**	**50.8**	**00.0**

2007	Maintenance of school facilities		Construction maintenance repair furniture		Purchase of text books		Purchase of stationery		Purchase other school supplies		Extra curricular activities		Assist teachers in teaching		Provision of school meals	
	%	SE	%	SE	00.0	0.00	%	SE	%	SE	%	SE	%	SE	%	SE
Central	00.0	0.00	19.8	0.00	00.0	0.00	90.1	0.00	90.1	0.00	68.3	00.0	0.00	0.00	14.1	0.00
Eastern	00.0	0.00	00.0	0.00	00.0	0.00	78.6	0.00	24.2	0.00	78.6	24.2	24.2	0.00	78.6	0.00
Island	00.0	0.00	36.3	0.00	00.0	0.00	70.1	0.00	36.3	0.00	100.0	29.9	29.9	0.00	33.8	0.00
Northern	01.4	0.00	00.0	0.00	00.0	0.00	62.8	0.00	24.8	0.00	88.1	12.4	12.4	0.00	37.2	0.00
Southern	00.0	0.00	00.0	0.00	00.0	0.00	37.2	0.00	00.0	0.00	78.7	57.3	57.3	0.00	21.3	0.00
Western	61.1	0.00	10.6	0.00	00.0	**0.00**	42.7	0.00	50.5	0.00	100.0	0.00	0.00	0.00	89.4	0.00
Seychelles	**08.2**	**0.00**	**12.8**	**0.00**	**00.0**	0.00	**67.3**	**0.00**	**48.4**	**0.00**	**82.2**	**0.00**	**15.9**	**0.00**	**46.6**	**0.00**

There were also considerable regional variations in the level of contributions made by community members to most of those activities. For example, in the case of 'Maintenance of school facilities', 'Construction, maintenance, repair of furniture', and 'Assistance of teachers in teaching' with low level of contribution overall, it can be noted that whilst no

contribution or very little contribution was made in all other regions, Western region registered a high percentage figure of around 61 percent for contributions to the maintenance of school facilities and Island region registered a comparatively moderate figure of around 36 percent for the construction, maintenance and repair of furniture whilst Southern region had a fairly high figure of about 57 percent for assisting teachers in teaching. However, there were still large regional for activities with high overall percentages. For example, for the 'Purchase of school supplies' the percentage figures ranged from 0 in Southern region to around to 90 percent in Central region. Similarly, for the 'Provision of school meals' the figures ranged from a low 14 percent in Central region to a high of around 89 percent in Western region.

The results in Table 5.4 help to confirm that some of the efforts of the Ministry of Education to encourage parental and community participation have met with some success. There has been an improvement in community contributions overall, from 2000 to 2007, for five out of the eight activities. The level of participation in the construction, maintenance and repair of school furniture has increased in 2007 by almost twice the figure in 2000. Purchase of school supplies has risen by about five percentage points and contribution to extra curricular activities has gone up by about ten. In 2000 there was no parent or community members who assisted teachers, by 2007 the figure of 15 percent was recorded. As a follow-up to these findings there may be a need to strengthened community participation in particular activities and in specific education.

Policy suggestions 5.4: The Ministry of Education should have a discussion with the Chairperson of the new School Council on the development of strategies to increase community participation in their particular schools.

5.6 School community problems

The head teachers were also asked to indicate the extent to which lack of co-operation from the community was a problem. The results have been presented in Table 5.5. It can be seen, for example, that in 2000, in Central region about eight percent of the pupils were in schools in which the school head said that lack of co-operation was not a problem, around 57 percent that it was a minor problem and about 34 percent that it was a major problem.

In 2007, overall, about 23 percent of the pupils were in schools in which the head reported that lack of community co-operation was not a problem, around 72 percent that it was a minor problem, and around five percent that it was a major problem. However, notable regional variations can be detected. In Western region around 80 percent of pupils were in schools where there was "no problem" with community cooperation whilst for schools in the Eastern region not one school head made such a report. In fact, the problems in Eastern regions were all minor. It is worth noting that for schools in Southern region, there was a higher incidence of major problems compared to the other regions where no major problem was reported

Table 5.5: Lack of community co-operation perceived as a problem

	2000						2007					
	Not a problem		A minor problem		A major problem		Not a problem		A minor problem		A major problem	
	%	SE	%	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	8.8	0.00	57.2	0.00	33.9	0.00	24.0	0.00	76.0	0.00	00.0	0.00
Eastern	49.0	0.00	28.1	0.00	22.9	0.00	00.0	0.00	100.0	0.00	00.0	0.00
Island	00.0	0.00	100.0	0.00	00.0	0.00	63.7	0.00	36.3	0.00	00.0	0.00
Northern	26.9	0.00	61.0	0.00	12,1	0.00	26.1	0.00	73.9	0.00	00.0	0.00
Southern	27.7	0.00	72.3	0.00	00.0	0.00	21.3	0.00	57.3	0.00	21.3	0.00
Western	53.3	0.00	44.7	0.00	00.0	0.00	79.3	0.00	20.7	0.00	00.0	0.00
Seychelles	**24.1**	**0.00**	**58.8**	**0.00**	**17.1**	**0.00**	**22.7**	**0.00**	**72.1**	**0.00**	**5.2**	**0.00**

The data in 2000 and 2007 seemed to provide inconclusive results as to the nature of change in community co-operation perceived as a problem by the school head. What is perhaps, more evident is that major problems in Central, Eastern and Northern, to some extent, have been eradicated in 2007. However, for Southern region where no problem was reported in 2000, in 2007 about 21 percent of pupils were in schools where heads perceived that lack of community co-operation was a major problem. One would like to ask what has happened in the Southern region. Moreover, one would still be concerned about the rise in minor problems as reported - the mean value has increased by about 14 percentage points from 2000 to 2007. The Ministry of Education should continue its efforts to strengthened community co-operation.

Policy suggestion 5.5: The Ministry of Education through the School Councils should target community co-operation as a major policy issue in the Education Reform.

5.7 Pupils' behavioural problems

Behavioural problems interfere with the learning environment and create a volatile and undisciplined climate in the school. The school head needs to be in a position to monitor the level of pupil behavioral problems in the school and to find ways to reduce them. In the SACMEQ II and SACMEQ III study school heads were asked to describe behavioural problems among pupils by indicating from a list of 18 pupil behaviours whether each behavior occurred according to the following frequencies: "never", "sometimes", or "often" in the school. The behaviours were selected because each of them represented a "serious" problem if they were prevalent in the school. The 18 behaviours have been listed in Table 5.6 along with the percentage of pupils whose school heads rated the problem as occurring sometimes or often for 2000 and 2007.

In Table 5.6 the results for 2007 is best interpreted alongside those of 2000 because there has been very little improvement, that is, reduction in the frequency of behavior problems from 2000 to 2007. Only two behavior problems seemed to be occurring less frequently: these are related to pupils' dropping out, (12 percent reduction in the percentage figure) and harassment of teachers by pupils (none reported in 2007 compared to a percentage figure of 5 in 2000).

Table 5.6: Frequency of pupil behavior problems

Pupils' behavioural problems	2000		2007	
	Sometimes/often		Sometimes/often	
	%	SE	%	SE
1.Pupils arriving late	93.6	0.00	99.8	0.00
2.Pupil absenteeism	100.0	0.00	100.0	0.00
3.Pupil skipping classes	41.7	0.00	52.9	0.00
4.Pupils dropping out of school	16.1	0.00	02.4	0.00
5.Classroom disturbance by pupils	96.9	0.00	99.8	0.00
6.Cheating by pupils	88.9	0.00	95.2	0.00
7. Use of abusive language by pupils	96.9	0.00	98.2	0.00
8. Vandalism by pupils	79.5	0.00	85.1	0.00
9. Theft by pupils	87.1	0.00	86.7	0.00
10.Bullying of pupils by other pupils	96.9	0.00	100.0	0.00
11.Verbal abusive of staff by pupils	56.1	0.00	62.7	0.00
12.Physical injury to staff by pupils	10.1	0.00	10.6	0.00
13.Sexual harassment of pupils by pupils	48.8	0.00	62.4	0.00
14.Sexual harassment of teachers by pupils	5.0	0.00	00.0	0.00
15. Drug abuse or possession by pupils	2.2	0.00	04.7	0.00
16.Alcohol abuse or possession by pupils	3.8	0.00	15.8	0.00
17. fights amongst pupils	96.9	0.00	100.0	0.00
18. Pupil health problems	100.0	0.00	100.0	0.00

Most of the behaviours with frequent rate of occurrence as indicated by the high percentage of pupils whose head reported that the behavior was a problem sometimes or often had remained very high since 2000 or has increased in 2007. For example, the figure for skipping classes, vandalism, verbally abusing staff, and sexual harassment of pupils by pupils have increased by about 11, 6, 7 14 percentage points, respectively. The higher rate of incidence of those behaviours would be cause for concern. The data seemed to suggest that there was major behavioural problems in the school which do have impact on educational performance (absenteeism, lateness, health problems) on discipline in the school (classroom disturbance, cheating, abusive language, vandalism, theft, bullying, fights) and on social cohesion within the school (sexual harassment, drug and alcohol abuse). The last three are emerging problems which would need policy intervention not only at school level but at community level.

In order to gauge the level of behavioural problems at national and regional levels, the responses to each question relating to pupil behavior were combined to form a scale that reflected the total number of pupil problems in each school. This was achieved by (a) assigning a score of "0" if the school head indicated that a particular behavior was "never" a problem and "1" if the particular behavior was "sometimes" or "often" a problem, and (b) summing these to give each school a score on an 18-point scale. The mean score for schools in each region and for Seychelles in 2000 and 2007 have been presented in the second and third column of Table 5.7.

In 2007, the results show that the incidence of pupil behavior problems was fairly high at the national level – with a mean of 11.7 being registered on the 18-point scale. Four of the

regions had similar average scores ranging from 11.1 to 11.8. For the two other regions the average was higher with a value of 12.0 and 12.2.

Table 5.7: Number of pupil and teacher behavior problems

Regions	2000				2007			
	Pupil		Teacher		Pupil		Teacher	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	11.5	0.00	3.8	0.00	12.0	0.00	4.0	0.00
Eastern	12.3	0.00	5.3	0.00	11.1	0.00	4.6	0.00
Island	11.4	0.00	3.8	0.00	12.2	0.00	5.3	0.00
Northern	10.5	0.00	3.7	0.00	11.8	0.00	5.0	0.00
Southern	10.5	0.00	3.5	0.00	10.7	0.00	3.2	0.00
Western	10.1	0.00	3.4	0.00	11.7	0.00	5.3	0.00
Seychelles	**11.2**	**0.00**	**3.9**	**0.00**	**11.7**	**0.00**	**4.5**	**0.00**

There has been a substantial increase in the prevalence of pupil behavior problems form 2000 to 2007. Only Eastern region registered a decrease. These findings are alarming since on the whole major behavioural problems were still predominant in school life and there seemed to be a tendency that they were escalating. There may be a need for policy intervention not only at school level but also at a wider community level. The Ministry of education has been aware of the elevated behavioural problems in school and a new pastoral care system has been implemented. Unfortunately, a monitoring mechanism has not been set up.

Policy suggestion 5.6: The Schools Division in collaboration with the Student Welfare Section should meet with school heads and the chair persons of the School Councils to discuss the findings that suggest an elevated level of behavioural problems among pupils. This meeting should be asked to prepare a plan to monitor the implementation of the new pastoral care system and its effect on the reduction of behavioural problems in schools.

5.8 Teachers' behavioural problems

Staff management forms a substantial part of the leadership responsibilities of the school head. Such work requires advanced inter-personal skills and in some cases may even require supportive interventions by more senior members of the Ministry of Education. The school heads were asked to provide some broad information concerning ten aspects of the general behavior of teachers in their schools. The behaviours were selected because each of them represent a "serious problem" if they were prevalent in schools. In other words, they were selected because (a) their potential to impact upon the smooth functioning of schools, and (b) their capacity to involve the school head in time-consuming staff management tasks.

The school heads were invited to rate the behaviours according to whether they "never", "sometimes", or "often" occurred in their own schools. It must be conceded here that this broad rating system was not a precise measure of the incidence rate. However, when these data were aggregated to regional and national level and the data for 2000 is compared to those of 2002, it was expected that they would provide some general trends and possible policy direction.

Table 5.8: Teacher behavioural problems

Teacher behavioural problems	2000		2007	
	Sometimes/often		Sometimes/often	
	%	SE	%	SE
1.Teaches arriving late	96.9	0.00	99.9	0.00
2. Teacher absenteeism	69.6	0.00	93.3	0.00
3.Teachers skipping classes	19.0	0.00	20.9	0.00
4.Bullying of pupils by teachers	59.0	0.00	76.4	0.00
5.Sexual harassment of teachers by other teachers	00.0	0.00	00.0	0.00
6. Sexual harassment of pupils by teachers	0.00	0.00	00.0	0.00
7. Use of abusive language by teachers	22.4	0.00	50.8	0.00
8. Drug abuse by teachers	00.0	0.00	00.0	0.00
9. Alcohol abuse by teachers	27.8	0.00	11.7	0.00
10. Teacher health problems	100.0	0.00	100.0	0.00

The ten behavioural problems have been listed in Table 5.8 along with the percentage of teachers whose school heads rated the problem as occurring sometimes in their schools for 2000 and 2007. These percentages are composites of ratings “sometimes” a problem and “often” a problem.

It can be seen from Table 5.8 that there were no staff problems in Seychelles primary schools concerning the serious matters of sexual harassment and drugs. However, it would appear that in 2007 there was some concern among school heads about teacher health problems (100 %), teachers arriving late (96.9%), teacher absenteeism (93.3%). Moreover, behaviours such as bullying pupils, use of abusive language has increased. The figure for bullying has risen by about 20 percent, and for abusive language, it has more than doubled. These findings are worrying since they would have an impact on the smooth running of the school and may need further exploration with individual school heads.

The responses to each question related to teacher behavior were combined to form a scale that reflected the total number of teacher behavior problems in each school. As with the pupil behaviours a score of “0” was assigned if the school head indicated that a particular behavior was “never” a problem and “1” if the particular behavior was “sometimes” or “often” a problem. These were summed to give each school a score on a 10-point scale.

The mean score for schools in each region and for Seychelles overall, in 2000 and 2007, have been presented in the second and last column of Table 5.7. The results show that incidence of teacher behavior problems has increased at national level – from a mean of 3.9 in 2000 to a mean of 4.5 in 2007. Similarly, there has been an increase in all regions (about one point) except in Eastern and Southern. In Southern region the situation with teacher behavior problems has remained more or less the same. In Eastern region the situation has improved with a decline of about one point. Except for schools in the Southern region, there is a need to explore teacher behavior problems further. The level of behavior problems nationally in 2007 seemed to be unacceptable.

Policy suggestions 5.7: The Schools Division should schedule an extraordinary meeting with primary school heads about teacher behavior problems and the problems with teachers arriving late, being absent, and not being covered when absent for illness and the emerging problem of teachers bullying pupils should be included on the agenda.

5.9 Borrowing of books from the library

The school library is one of the major resources in the school and pupils should learn how to use the library and should be encouraged to borrow books from the library. The school head is responsible to ensure that the school library is well-stocked, appropriately managed and that pupils are making full use of the library. The school head was asked if pupils can borrow books from the school library to take them home: The response options were 'No', 'Yes' and 'We have no school library'. The pupils were also asked they could borrow books to take them home from the school library: The response options were 'No', 'Yes' and 'We have no school library'. The percentage of pupils who said that they can borrow books from the library in 2000 and 2007 has been presented in Table 5.8.

The results in Table 5.8 point to a deterioration from 2000 to 2007. The percentage of pupils who can borrow books from the library has dropped by about 20 percent and in 2007 the variation amongst regions was quite large. In Southern region only about half of the pupils were allowed to borrow books from the library compared to about 91 and 88 percent in Western and Eastern region, respectively. These are worrying results

Table 5.9: Borrowing books from school library

Regions	2000		2007	
	Pupil		Pupil	
	%	SE	%	SE
Central	93.1	1.10	57.0	1.70
Eastern	90.6	2.00	88.3	3.10
Island	95.0	1.70	57.9	2.10
Northern	94.6	1.40	75.5	1.70
Southern	90.1	2.20	47.2	2.20
Western	96.5	1.40	91.4	1.60
Seychelles	**93.3**	**0.60**	**67.1**	**0.80**

Firstly because all school heads in 2000 and 2007 said that pupils can borrow books from the library, Secondly, when a more detailed analysis was carried out it was found that around a quarter of the pupils in Primary 6 were not allowed to borrow books from the school library. Southern region was the worse with around half of the pupils not allowed to borrow books. Further investigation needs to be carried out in individual schools to find out more about the school library services and why some pupils cannot borrow books or think that they cannot borrow books from the school library.

Policy suggestion 5.8: The Ministry of Education should conduct a survey on the use of school library in each individual school and work with school heads to develop school library information and procedures for all pupils to be allowed to borrow books from the school library.

5.10 Conclusion

This chapter has outlined the main features of primary schools in Seychelles as drawn from information supplied by school heads. Indicators such as the characteristics of school heads, the school environment in terms of school activities, community relations, behavioural problems with staff and school library usage were examined to establish trends between 2000 and 2007.

It was found that the academic level of school heads was quite high and most of them had adequate training. Some comments were made about the job description in relation to teaching periods for school heads and procedures for recruitment in relation to experience and training and deployment in relation to age and gender.

School activities on the whole produced varying results. Community links and school-parent relationships had improved. However, there were some deficiencies concerning the school library which needs further investigation. Some concerns were raised about inspection and it was suggested that the new inspectorate system with more staff should go a long way to eliminate some of the difficulties encountered previously to schedule school visits.

The most disturbing findings concerned pupil and teacher behavioural problems. Pupil disciplinary behavioural problems were quite high in 2000 and all the signs in 2007 seem to indicate that these problems were becoming worse nationally. Moreover, anti-social behaviours such as bullying, vandalism, drugs and alcohol abuse seemed to be on the rise. At the same time, teacher behavior problem which were at a fairly low level nationally in 2000 seemed to have increased in 2007. In particular, behaviours such as arriving late and absenteeism which were already high had gone up further and more interaction problems such bullying of pupils and the use of abusive language seemed to have increased. The data seemed to suggest that schools operation is being thwarted by an unreasonable level of pupil and teachers behavior problems. It is expected that the new pastoral care system should be able to reduce some of these problems as schools seemed to be struggling to fulfill its pedagogical mission.

Chapter 6
Educational Resources

6.1 Introduction

The selection and allocation of educational resources for school systems has always been a critical issue for educational planners who are aiming to improve the conditions of schooling and the quality of education.

In a perfect world it would be possible to offer all pupils access to the most modern buildings and equipment, to ensure that all teachers were well-trained and supported by in-service professional development, and to provide comprehensive supplies of teaching and learning materials for all pupils and teachers. However, the realities of funding constraints in the SACMEQ countries require educational planners to make careful choices among affordable and effective educational resource inputs for schooling.

Informed decisions about the selection and deployment of educational resources must be guided by systematic indicator systems that make accurate assessments of: (a) educational resources that are available within schools ("resource levels"), and (b) changes in the availability of educational resources that may have occurred in a given period of time ("resource trends").

For the SACMEQ III Project it was decided that the examination of levels and trends in educational resources should be undertaken as a two-step process by: (a) dividing the most important educational resources into two main groups: "essential classroom resources" and "desirable physical and human resources", and (b) making assessments of resource coverage by comparison with SACMEQ benchmark standards.

Essential Classroom Resources referred to the most basic elements of the classroom educational environment (such as writing materials, teacher guides, textbooks, and water access).
It was considered that these kinds of resources represented pre-requisites for pupil learning in the sense that the absence of any single one of them was likely to prevent pupils from participating effectively in lessons. For example: If pupils do not have writing materials then they will not be able to take notes and complete written exercises. Similarly: If pupils do not have reading textbooks then they will not be able to follow reading lessons and complete homework assignments based on reading textbooks. And so on.

In this chapter 6 essential classroom resources were considered in two groups: "teaching and learning materials" (6 resources) and "equipment and facilities (6 resources). These resources were assessed by using the 12 indicators defined in the Appendix to this chapter.

The degree to which Grade 6 pupils had access to these resources has been described in Table 6.1.

Desirable Physical and Human Resources referred to important enhancements to the educational environment through the provision of physical resources (such as school buildings, electricity, computers, and staff rooms) and human resources (such as trained school heads, in-service education programmes for teachers, acceptable class sizes, and gender-balanced staffing). It was considered that these kinds of resources were additional to the essential resources described above and that they focussed on enhancements to the educational environment that were likely to improve both the general conditions of schooling and the quality of education. For example: If pupils attend schools with buildings that have broken windows, damaged walls, and leaking roofs, then poor weather conditions may result in damage to equipment and uncomfortable conditions for teachers and pupils. Similarly: If pupils are taught by poorly- trained teachers who have no access to in-service programmes then the quality of classroom lessons may be very poor. And so on.

In this chapter 6 desirable physical resources were considered in two groups: "buildings" (4 resources) and "equipment and facilities" (8 resources); and 12 desirable human resources were considered in three groups: "school heads" (4 resources), "teachers" (6 resources), and "environment" (2 resources). The degree to which Primary 6 pupils had access to these resources has been described in Tables 6.2 and 6.3.

6.2 A "Benchmark Standard" for Resource Coverage

Pupils were used as the units of analysis and reporting in the SACMEQ research programme. Therefore, the figures presented in Tables 6.1, 6.2, and 6.3 referred to the percentages of Primary 6 pupils in Seychelles and its education regions during 2000 and 2007 that had access to the 36 resources described by the indicators defined in the Appendix to this chapter.

The SACMEQ Research Teams decided to establish a realistic "benchmark standard" for resource coverage by starting with the expectation that all pupils (that is 100 percent) should have access to these 36 resources and then conceding that it would be reasonable to relax this expectation to 85 percent because of: (a) expansions in enrolment, (b) construction of new classrooms and schools, and (c) the realities of financial constraints.

The percentages presented in Tables 6.1, 6.2, and 6.3 have been colour-coded in order to reflect resource levels in comparison with the benchmark standard of 85 percent coverage. Figures in green denote resources that were equal to or above 85 percent coverage of Grade 6 pupils, and figures in red denote resources that were below 85 percent coverage of Grade 6 pupils. For example, the first column of figures in Table 6.1 showed that in 2000 the percentages of Primary 6 pupils with teachers that possessed a teacher guide for reading were above the 85 percent benchmark for Seychelles overall (92.7%) and several regions: Central (97.4%), Eastern (95.1%), Southern (100.0%), and Western (100%). The

coverage of this resource was below the 85 percent benchmark standard for Island (71.9%) and Northern (84.1%) regions.

6.3 Resource Group 1: "Essential Classroom Resources"

a) Generally Good Levels of Essential Classroom Resources in 2000 and 2007

For Seychelles overall during 2007 the percentages in Table 6.1 for all six of the "Equipment and Facilities" resources were presented in green because they satisfied the SACMEQ benchmark standard: writing board (98.0%), pupil sitting & writing places (100.0%), teacher table & chair (100%), school or class library (100.0%), radio (100.0%), and water access (100.0%). However, in 2007 only three of the percentages for the "Teaching and Learning Materials" resources satisfied the benchmark standard at the national level: teacher reading guide (90.2%), dictionary (98.0%), and pupil writing materials (97.8%).

Teaching and Learning Materials

- Teacher Reading Guide
- Dictionary
- Pupil Writing Materials

Equipment and Facilities

- Writing Board
- Pupil Sitting & Writing Place
- Teacher Table & Chair
- School or Class Library
- Radio
- Water Access

At the regional level for Seychelles during 2007 the availability of these 9 resources was also quite good for most regions – except for Island region. The figures for Island region in Table 6.1 for four essential resources (teacher reading guide, dictionary, writing board, and teacher table & chair) were presented in red because they were technically below the benchmark standard of 85 percent coverage. However, upon closer inspection, the results for these four resources were not problematic in Island region because they were actually at a "borderline" level of 84.8 percent – which was only one fifth of one percent below the SACMEQ benchmark standard.

b) Generally Poor Levels of Essential Classroom Resources in 2000 and 2007

For Seychelles overall during 2007 the percentages in Table 6.1 for three of the "Teaching and Learning Materials" resources at the national level were presented in red because they

did not satisfy the SACMEQ benchmark standard: teacher mathematics guide (75.4%), pupil reading textbook (42.3%), and pupil mathematics textbook (62.8%).

Teaching and Learning Materials

- Teacher Mathematics Guide
- Pupil Reading Textbook
- Pupil Mathematics Textbook

An examination of the national coverage trends between 2000 and 2007 for the two textbook resources revealed very disturbing results. The coverage figures for both pupil reading and mathematics text books deteriorated between 2000 and 2007 - registering a fall of around 5 percent for reading textbooks and around 13 percent for mathematics textbooks. In contrast - even though the coverage of teacher mathematics guides (75.4%) was below the benchmark standard in 2007 - there was a pleasing improvement of around 25 percent in the coverage of this resource between 2000 and 2007.

At the regional level for Seychelles there was a very worrying collapse in textbook availability associated with Island region between 2000 and 2007. The percentage coverage for pupil reading textbooks for this region dropped by over 20 percent; and the situation for pupil mathematics textbooks was catastrophic – falling from an excellent 91.4 percent in 2000 to almost zero in 2007. An investigation should be undertaken in Island region in order to identify and address the reasons for these disturbing trends.

c) Summary and Policy Suggestions

Between 2000 and 2007 the provision of teacher reading guides, pupil writing materials, classroom writing boards, and basic classroom furniture - such as sitting and writing places for teachers and pupils – was very good for Seychelles overall and its regions. In addition all schools had radio and water access, and either classroom or school libraries.

However, there were serious problems with the provision of textbook resources – with low levels of provision in 2007, and a substantial deterioration in coverage during the period 2000 to 2007. The decline in textbook provision was particularly severe in Island region.

***Policy Suggestion 6.1*:** The Ministry of Education should take immediate action to provide financial support that will ensure improvements in the availability of reading and mathematics textbooks.

***Policy Suggestion 6.2*:** The Ministry of Education should establish why there was a major decline in the provision of pupil reading and mathematics textbooks in Island region between 2000 and 2007, and then take action to remedy this situation.

Table 6.1: Percentages for Essential Classroom Resources for Seychelles on 2000 (SACMEQ II) and 2007 (SACMEQ III)

2000	TEACHING & LEARNING MATERIALS														EQUIPMENT & FACILITIES									
	Teacher Guide (Reading)		Teacher Guide (Math)		Dictionary		Exercise Book & Pen/Pencil & Ruler		Own Reading Textbooks		Own Math Textbooks		Writing Board		Pupil Sitting & Writing Place		Teacher Table & Chair		Library (Class/School)		Radio		Water	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	97.4	0.68	73.2	1.39	97.4	0.68	86.2	1.49	46.4	2.02	72.2	1.91	91.5	1.17	100.0	0.00	91.5	1.17	100.0	0.00	100.0	0.00	100.0	0.00
Eastern	95.1	1.38	35.1	2.13	100.0	0.00	86.2	2.42	48.9	3.37	76.9	2.90	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Island	71.9	3.18	20.7	0.00	100.0	0.00	87.0	2.67	63.1	3.22	91.4	2.12	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Northern	84.1	1.64	26.8	1.86	100.0	0.00	85.3	2.23	38.6	3.05	74.8	2.46	86.2	1.85	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Southern	100.0	0.00	27.7	0.00	100.0	0.00	90.7	2.13	45.3	3.58	69.0	3.13	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Western	100.0	0.00	65.7	2.71	100.0	0.00	86.7	2.60	45.6	3.51	78.1	3.08	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
SEYCHELLES	**92.7**	**0.53**	**48.3**	**0.72**	**99.1**	**0.24**	**86.7**	**0.87**	**46.9**	**1.21**	**75.6**	**1.05**	**94.7**	**0.52**	**100.0**	**0.00**	**97.0**	**0.41**	**100.0**	**0.00**	**100.0**	**0.00**	**100.0**	**0.00**

2007	TEACHING & LEARNING MATERIALS														EQUIPMENT & FACILITIES									
	Teacher Guide (Reading)		Teacher Guide (Math)		Dictionary		Exercise Book & Pen/Pencil & Ruler		Own Reading Textbooks		Own Math Textbooks		Writing Board		Pupil Sitting & Writing Place		Teacher Table & Chair		Library (Class/School)		Radio		Water	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	95.0	0.89	94.6	0.92	100.0	0.00	96.9	0.77	44.9	2.05	68.7	1.93	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Eastern	89.8	1.59	75.5	2.77	100.0	0.00	98.1	0.95	45.7	2.72	92.3	1.83	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Island	84.8	1.96	87.7	2.05	84.8	1.96	99.0	0.71	42.8	2.80	1.0	0.72	84.8	1.96	100.0	0.00	84.8	1.96	100.0	0.00	100.0	0.00	100.0	0.00
Northern	75.2	0.00	30.3	0.00	100.0	0.00	99.1	0.65	29.9	2.67	80.7	2.41	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Southern	100.0	0.00	84.8	2.52	100.0	0.00	98.3	0.98	53.4	3.21	70.2	3.05	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Western	91.4	1.61	54.8	2.29	100.0	0.00	96.9	1.23	35.3	3.23	52.2	3.40	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
SEYCHELLES	**90.2**	**0.50**	**75.4**	**0.71**	**98.0**	**0.26**	**97.8**	**0.38**	**42.3**	**1.10**	**62.8**	**0.97**	**98.0**	**0.26**	**100.0**	**0.00**	**98.0**	**0.26**	**100.0**	**0.00**	**100.0**	**0.00**	**100.0**	**0.00**

6.4 Resource Group 2: Desirable Physical Resources

a) Generally Good Levels of Physical Resources in 2000 and 2007

During 2007 for Seychelles overall the percentages in Table 6.2 for seven of the eight "Equipment and Facilities" resources were presented in green because they satisfied the SACMEQ benchmark standard: class cupboard (94.3%), class bookshelf (98.0%), sports/playground (90.7%), electricity (100.0%), television (92.7), photocopier (97.3%), and computer (100.0%). The percentages for two of the four "Buildings" resources were also presented in green at national level because they satisfied the benchmark standard: school head office (100.0%) and staff room (100.0%). These very positive general patterns also applied in most of the Seychelles regions.

Buildings
- School Head Office
- Staff Room

Equipment and Facilities
- Class Cupboard
- Class Bookshelf
- Sports/Play Ground
- Electricity
- Television
- Photocopier
- Computer

b) Generally Poor Levels of Physical Resources in 2000 and 2007

In 2007 the percentages in Table 6.2 for two "Buildings" resources and one of the "Equipment and Facilities" resources were presented in red at the national level because they did not satisfy the SACMEQ benchmark standard: building conditions (77.2%), meeting hall (27.3%), and school fence (81.5%). However, one of the pleasing aspects of these results was that all three of these physical resources showed improvements of around 10 percent to 15 percent between 2000 and 2007.

Buildings
- Building Conditions
- Meeting Hall

Equipment and Facilities
- School Fence

A troubling feature of the condition of school buildings was the large amount of variation in this resource across education regions during 2007. The percentage of Primary 6 pupils that experienced school buildings in good condition was excellent in Island and Western regions (both 100.0%) – but very poor in Central region (55.6%).

c) Summary and Policy Suggestions

Between 2000 and 2007 there was very good provision of classroom furniture required for basic storage facilities, sports/playgrounds, and electricity-driven teaching/administrative equipment such as televisions, photocopiers, and computers. In addition, schools were well-provided for in terms of school head offices and staffrooms.

The area where most attention was needed was school maintenance. School buildings that are kept in good condition make it easier to protect valuable equipment and books, and they also provide a much more comfortable and welcoming environment in which pupils can learn. For these reasons investment in school maintenance has long-term payoffs in terms of the effectiveness and overall costs of operating an education system.

Access to a meeting hall also needs to be improved because these facilities can be invaluable for expanding artistic aspects of the school curriculum (such as music, drama, and dance), and for encouraging community activities that result in closer linkages between homes and schools.

***Policy Suggestion 6.3*:** The Ministry of Education should undertake a national audit of the condition of school buildings, and then establish a system for ensuring that needed repairs are completed. The starting point for the audit should be Central region where school heads have indicated a high need for building repairs.

6.5 Resource Group 3: Desirable Human Resources

a) Generally Good Levels of Human Resources in 2000 and 2007

During 2007 the percentage coverage figures in Seychelles for three resources linked with staff academic preparation – "school heads: academic training" (100.0%), "teachers: pre-service training" (90.8%), and "teachers: subject knowledge in reading" (91.1%) – were presented in green in Table 6.3 because they satisfied the SACMEQ benchmark standard. An additional two resources focussed on the educational environment were also at quite good levels: class size (100.0%) and teacher attendance (89.5%).

School Heads
- Academic Training

Teachers
- Pre-Service Training
- Subject Knowledge in Reading

Environment
- Class Size
- Teacher Attendance

Table 6.2: Percentages for Desirable Physical Resources for Seychelles (SACMEQ II and SACMEQ III)

2000	BUILDINGS								EQUIPMENT & FACILITIES															
	Building Conditions		School Head Office		Staff Room		Meeting Hall		Class Cupboard		Class Bookshelf		Sports/Play Ground		School Fence		Electricity		Television		Photocopier		Computer	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	58.0	0.00	100.0	0.00	100.0	0.00	6.2	0.00	76.3	1.50	91.5	1.17	93.8	0.00	85.7	0.00	100.0	0.00	100.0	0.00	93.8	0.00	93.8	0.00
Eastern	28.1	0.00	100.0	0.00	100.0	0.00	0.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	28.1	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Island	54.9	0.00	100.0	0.00	100.0	0.00	0.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	79.3	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Northern	72.3	0.00	87.9	0.00	100.0	0.00	45.5	0.00	100.0	0.00	100.0	0.00	87.9	0.00	72.3	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Southern	100.0	0.00	100.0	0.00	100.0	0.00	49.5	0.00	100.0	0.00	100.0	0.00	100.0	0.00	72.3	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Western	67.0	0.00	100.0	0.00	100.0	0.00	0.0	0.00	100.0	0.00	79.7	2.71	100.0	0.00	86.0	0.00	100.0	0.00	100.0	0.00	88.3	0.00	100.0	0.00
SEYCHELLES	62.1	0.00	97.9	0.00	100.0	0.00	15.8	0.00	91.6	0.53	94.7	0.52	95.7	0.00	73.4	0.00	100.0	0.00	100.0	0.00	96.4	0.00	97.8	0.00

2007	BUILDINGS								EQUIPMENT & FACILITIES															
	Building Conditions		School Head Office		Staff Room		Meeting Hall		Class Cupboard		Class Bookshelf		Sports/Play Ground		School Fence		Electricity		Television		Photocopier		Computer	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	55.6	0.00	100.0	0.00	100.0	0.00	9.9	0.00	89.6	1.20	100.0	0.00	80.2	0.00	80.2	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Eastern	78.6	0.00	100.0	0.00	100.0	0.00	78.6	0.00	100.0	0.00	100.0	0.00	100.0	0.00	78.6	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Island	100.0	0.00	100.0	0.00	100.0	0.00	33.8	0.00	84.8	1.96	84.8	1.96	100.0	0.00	70.1	0.00	100.0	0.00	63.7	0.00	100.0	0.00	100.0	0.00
Northern	83.0	0.00	100.0	0.00	100.0	0.00	24.3	0.00	98.6	0.00	100.0	0.00	100.0	0.00	83.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00	100.0	0.00
Southern	78.7	0.00	100.0	0.00	100.0	0.00	21.3	0.00	100.0	0.00	100.0	0.00	100.0	0.00	78.7	0.00	100.0	0.00	78.7	0.00	100.0	0.00	100.0	0.00
Western	100.0	0.00	100.0	0.00	100.0	0.00	18.2	0.00	100.0	0.00	100.0	0.00	79.3	0.00	100.0	0.00	100.0	0.00	100.0	0.00	79.3	0.00	100.0	0.00
SEYCHELLES	77.2	0.00	100.0	0.00	100.0	0.00	27.3	0.00	94.3	0.48	98.0	0.26	90.7	0.00	81.5	0.00	100.0	0.00	92.7	0.00	97.3	0.00	100.0	0.00

b) Generally Poor Levels of Human Resources in 2000 and 2007

In 2007 the percentages in Table 6.3 for four resources linked with staff training were presented in red because they did not satisfy the SACMEQ benchmark standard at the national level: school heads: management training (78.3%), teachers: in-service training (61.9%), and school heads and teachers: HIV-AIDS training (60.7% and 18.9%, respectively). All of these areas of staff training are normally delivered via in-service programmes.

The very low percentage of teachers that received HIV-AIDS training was of particular concern because the Seychelles has recently registered an increase in HIV infection rates among young people. The results for teachers' subject matter knowledge in mathematics also registered an inadequate level in 2007 (64.7%), and very worrying decline of almost 25 percent from a very good level in 2000 (87.9%).

School Heads

- Management Training
- HIV-AIDS Training

Teachers

- In-Service Training
- HIV-AIDS Training
- Subject Knowledge in Mathematics

c) Summary and Policy Suggestions

There were three important features associated with the research results presented above for human resources.

First, in Seychelles there seems to be a sound situation with respect to the delivery of teacher training before teachers take up their positions (pre-service) – but problems associated with the delivery of extra teacher training after teachers commence their jobs (in-service).

Second, the subject matter knowledge base for teachers in Seychelles is quite good (and improving) in the area of reading – but quite poor (and deteriorating) in the area of mathematics. For mathematics this was extremely serious because the research results for essential classroom resources showed that there was also a lack of teacher guides in mathematics and a lack of pupil mathematics text books.

Third, there was a major training need for both school heads and teachers in terms of knowledge about HIV-AIDS. This situation has implications for designing and delivering effective HIV-AIDS prevention education programmes in the Seychelles

Table 6.3: Percentages for Desirable Human Resources for Seychelles (SACMEQ II and SACMEQ III)

2000	SCHOOL HEADS								TEACHERS												ENVIRONMENT			
	Female School Heads		**Sch. Head Educ.** – Senior Sec. or more		**Sch. Head. Mngt. Course**		**Sch. Head HIV/AIDS Course**		**Female Reading Teachers**		**In-service Trg.** (Last 3yrs - Rd.Tch)		**Pre-service Trg** (>2yrs - Rd Tch)		**Spec. Training** HIV/AIDS Course		**Teacher Subject Knowledge** (Read.)		**Teacher Subject Knowledge** (Math)		**Acceptable Class Size** (≤ 40)		**Teacher Class Attendance**	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	100.0	0.00	100.0	0.00	66.1	0.00	××	××	100.0	0.00	23.6	1.35	94.1	0.95	××	××	65.5	1.36	93.1	1.00	100.0	0.00	100.0	0.00
Eastern	100.0	0.00	100.0	0.00	71.9	0.00	××	××	100.0	0.00	44.9	3.39	95.6	1.33	××	××	78.2	3.04	85.8	2.24	100.0	0.00	100.0	0.00
Island	100.0	0.00	100.0	0.00	79.3	0.00	××	××	100.0	0.00	73.1	3.18	100.0	0.00	××	××	81.1	2.29	100.0	0.00	100.0	0.00	100.0	0.00
Northern	100.0	0.00	73.1	0.00	100.0	0.00	××	××	93.3	1.14	52.7	2.74	64.5	2.47	××	××	96.2	1.19	77.5	2.39	100.0	0.00	100.0	0.00
Southern	49.5	0.00	100.0	0.00	100.0	0.00	××	××	100.0	0.00	72.3	0.00	100.0	0.00	××	××	90.2	1.73	81.0	2.55	100.0	0.00	100.0	0.00
Western	100.0	0.00	100.0	0.00	11.7	0.00	××	××	100.0	0.00	30.7	0.00	100.0	0.00	××	××	100.0	0.00	86.0	0.00	100.0	0.00	100.0	0.00
SEYCHELLES	94.0	0.00	95.4	0.00	71.8	0.00	××	××	98.8	0.20	43.3	0.88	91.3	0.57	××	××	81.1	0.72	87.9	0.69	100.0	0.00	100.0	0.00

2007	SCHOOL HEADS								TEACHERS												ENVIRONMENT			
	Female School Heads		**Sch. Head Educ.** – Senior Sec. or more		**Sch. Head. Mngt. Course**		**Sch. Head HIV/AIDS Course**		**Female Reading Teachers**		**In-service Trg.** (Last 3yrs - Rd.Tch)		**Pre-service Trg** (>2yrs - Rd Tch)		**Spec. Training** HIV/AIDS Course		**Teacher Subject Knowledge** (Read.)		**Teacher Subject Knowledge** (Math)		**Acceptable Class Size** (≤ 40)		**Teacher Class Attendance**	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	68.3	0.00	100.0	0.00	90.1	0.00	90.1	0.00	100.0	0.00	52.4	1.83	96.6	0.77	33.9	0.00	95.6	0.79	65.5	1.75	100.0	0.00	85.9	0.00
Eastern	100.0	0.00	100.0	0.00	75.8	0.00	78.6	0.00	100.0	0.00	75.5	2.77	100.0	0.00	24.2	0.00	88.8	1.59	63.2	2.18	100.0	0.00	75.8	0.00
Island	100.0	0.00	100.0	0.00	70.1	0.00	0.0	0.00	100.0	0.00	72.5	2.84	87.7	2.05	0.0	0.00	100.0	0.00	46.8	2.84	100.0	0.00	100.0	0.00
Northern	100.0	0.00	100.0	0.00	86.7	0.00	62.8	0.00	75.8	1.71	51.9	2.55	75.8	1.71	11.9	0.00	100.0	0.00	58.3	2.80	100.0	0.00	100.0	0.00
Southern	100.0	0.00	100.0	0.00	42.7	0.00	21.3	0.00	100.0	0.00	64.9	3.52	100.0	0.00	21.3	0.00	87.1	1.72	91.6	1.72	100.0	0.00	100.0	0.00
Western	49.5	0.00	100.0	0.00	81.8	0.00	61.1	0.00	100.0	0.00	68.7	0.00	77.5	2.80	0.0	0.00	68.0	2.47	65.4	2.29	100.0	0.00	81.8	0.00
SEYCHELLES	82.8	0.00	100.0	0.00	78.3	0.00	60.7	0.00	96.5	0.25	61.9	0.99	90.8	0.58	18.9	0.00	91.1	0.53	64.7	0.93	100.0	0.00	89.5	0.00

***Policy Suggestion 6.4*:** The Ministry of Education needs to strengthen its in-service training programmes so that all school heads keep abreast of modern management methods, and all school staff have sufficient knowledge to be able to contribute to the effectiveness of HIV-AIDS prevention education programmes.

***Policy Suggestion 6.5*:** The Ministry of Education should establish a specialist committee to undertake a comprehensive review of the delivery of mathematics teaching at the upper primary school level (training, textbooks, and teacher guides) so as to ensure that plans are made to improve teaching and learning materials and the knowledge base of Primary 6 teachers.

d) The Issue of Gender Equity in School Staffing Arrangements

In 2007 for Seychelles overall and for most education regions there were two human resources described in Table 6.3 where percentage coverage figures were shown in orange: female school heads (82.8%) and female reading teachers (96.5%). The reason why they were shown in orange was because of the difficulty of setting a SACMEQ benchmark standard for these resources.

For example, if an education system has a policy that staffing should be balanced across gender groups then an important staffing goal would be to ensure that 50 percent of teachers and school heads were female. On the other hand, if there was general community agreement that women made better teachers and better administrators at the primary school level then a goal of 100 percent female staffing might be a more appropriate policy.

In the absence of explicit goals for gender-balanced staffing it was not possible to make evaluative judgements in this report about the current staffing situation for Seychelles. However, it did seem reasonable to point out that the operation and administration of primary schools in Seychelles could certainly be described as a "woman's world" at this point of time.

Perhaps the time has come to conduct an open debate in Seychelles as to whether the existing gender imbalance in primary school staffing arrangements should be continued or called into question?

Two interesting issues that may or may not be linked with the current staffing situation are that for many years and in many Seychelles primary schools there have been (i) much higher percentages of girls placed in "better grade streams", and (ii) much higher percentages of girls performing at higher achievement levels in reading and mathematics.

***Policy Suggestion 6.5*:** The Ministry of Education should sponsor a public debate on gender equity issues related to the functioning of primary schools in Seychelles – with particular attention being given to staffing, streaming, and pupil achievement levels.

6.6 Conclusion

In this chapter the levels and trends in 36 educational resources have been examined for Seychelles primary schools over the period 2000 to 2007.

In broad terms the resource situation was quite good – with a total of 23 essential and desirable educational resources satisfying the SACMEQ benchmark of 85 percent coverage of Grade 6 pupils. However, among the 13 educational resources where the SACMEQ benchmark was not reached there were several causes for concern – and these were used to generate policy suggestions for consideration by the Ministry of Education.

One of the most important issues arising from these analyses was associated with a combination of several policy messages about mathematics teaching in Seychelles primary schools. The results for "essential classroom resources" showed problems in the provision of teacher mathematics guides and pupil mathematics textbooks; and the results for "desirable human resources" indicated problems in the areas of teacher subject matter knowledge in mathematics and the provision of sufficient in-service education programmes. When taken in combination these results certainly warrant a very close examination of all aspects of mathematics teaching in Seychelles primary schools.

Another important issue was the area of gender-equity in staffing - and the need to examine this matter in association with a consideration of other potentially-related issues linked with the absence of gender balance in streaming practices and educational achievement levels. These are controversial issues within Seychelles society that cannot be answered comprehensively via the SACMEQ research programme, and therefore the policy suggestion on this topic was restricted to a call for a gender-sensitive public debate about staffing, streaming, and achievement levels.

Appendix 1: Sources of School Resources Variables

	Essential Classroom Resources	Source	Instrument	Variable(s)
1	Teacher has Teacher Guide (Reading)	Teacher	TBK#14.04	XRESTGR
2	Teacher has Teacher Guide (Math)	Teacher	TBK#14.05	YRESTGM
3	Dictionary in Classroom	Teacher	TBK#14.02	XRESENGD
4	Pupil has Exercise Book & Pen/Pencil & Ruler	Pupil	PBK#28.1; PBK#28.7/PBK#28.3 & PBK#28.6	PMAT01; PMAT03; PMAT06; PMAT07
5	Pupil has Own Reading Textbooks	Pupil	PBK#53	PTEXTR
6	Pupil has Own Math Textbooks	Pupil	PBK#54	PTEXTM
7	Writing Board in Classroom	Teacher	TBK#12.1	XRESCKBD
8	Pupil has a Sitting & Writing Place	Pupil	PBK#29 & PBK#30	PWPLACE
9	Teacher has a Table & Chair	Teacher	TBK#12.8 & TBK12.9	TWPLACE
10	School or Classroom has a Library	Teacher & School Head	TBK#12.7/SHBK#19.01	XRESCLIB; SRES01
11	School has a Radio	School Head	SHBK#19.21	SRES21
12	School has Water	School Head	SHBK#19.15	SRES15

	Desirable Physical Resources	Source	Instrument	Variable(s)
1	Building Conditions	School Head	SHBK#18	SCONDIT
2	School has a School Head Office	School Head	SHBK#19.04	SRES04
3	School has a Staff Room	School Head	SHBK#19.03	SRES03
4	School has a Meeting Hall	School Head	SHBK#19.02	SRES02
5	Class Cupboard in Classroom	Teacher	TBK#12.5	XRESCPBD
6	Class Bookshelf in Classroom	Teacher	TBK#12.6	XRESBKSH
7	School has Sports/Play Ground	School Head	SHBK#19.07	SRES07
8	School has School Fence	School Head	SHBK#19.09	SRES09
9	School has Electricity	School Head	SHBK#19.20	SRES20
10	School has Television	School Head	SHBK#19.23	SRES23
11	School has Photocopier	School Head	SHBK#19.29	SRES29
12	School has Computer	School Head	SHBK#19.31	SRES31

	Desirable Human Resources	Source	Instrument	Variable(s)
1	School has a Female School Head	School Head	SHBK#4	SSEX
2	School Head has Senior Sec. Educ. or More	School Head	SHBK#6	SQACADEM
3	School Head has Attended a Management Course	School Head	SHBK#10	SQSPEC
4	School Head has Attended a Special Course on HIV/AIDS	School Head	SHBK#32	SHCRSHIV
5	Female Reading Teachers	Teacher	TBK#1	XSEX
6	Reading Teacher has Attended In-service Training in the Last 3yrs	Teacher	TBK#7	XINSERVC
7	Reading Teacher has Pre-service Training of 2yrs or More	Teacher	TBK#5	XQPROFES
8	School has a Teacher with Special Training on HIV/AIDS Issues	School Head	SIBK#46.1	SSPECHV
9	Teacher Subject Knowledge (Reading)	Teacher	Teacher Reading Test	ZRALOCT
10	Teacher Subject Knowledge (Mathematics)	Teacher	Teacher Math Test	ZMALOCT
11	Acceptable Class Size (≤ 40)	Teacher	SF No. of Pupils	SFPUP
12	Teacher Class Attendance	School Head	SHBK#16.02 SHBK#16.03	STCHPR02; STCHPR03

Chapter 7
Achievement in reading and mathematics

7.1 Introduction

The chapter looks at the levels and trends in reading and mathematics achievement of Primary 6 pupils and their teachers. Comparisons of results between SACMEQ II and SACMEQ III will be made to establish whether there has been improvement in achievements or not. The pupils and their teachers were administered tests in reading, mathematics and on knowledge about HIV-AIDS and this chapter focuses on the achievements in reading and mathematics only. The results will be reported in terms of scaled scores and in terms of the percentage of pupils and teachers who had reached the various levels of achievement.

a) Generating the scores

The Rasch scaling procedures were used to generate the reading and mathematics scores and a linear transformation procedure was applied that resulted in the mean and standard deviation of pupil scores being 500 and 100 respectively. As a result a score of 500 was equal to the average of all SACMEQ country mean scores in SACMEQ II.

b) The competency Levels

The reading test items and the mathematics test items were first arranged in order of difficulty, and then examined item-by-item in order to describe specific skills required to provide correct responses, When items had been linked to specific skills they were placed in groups of test items such that the item in each group had similar difficulty values and shared a common “theme” with respect to the underpinning competencies required to provide correct responses. The skills audit for the reading and mathematics tests resulted in the identification of eight levels of competence for each test.

The results of the skills audit have been presented in Figure 7.1. A descriptive name was linked with each of the levels – in order to summarise the competencies associated with each group of test items. The first three competency levels in reading and mathematics employed the same prefixes (“Pre-“, “Emergent”, and “Basic”) in order to reflect the mechanical nature of the most elementary competencies. From the fourth level upwards the prefixes of the summary names were different and were designed to reflect deeper levels of understanding of subject-specific competencies.

The eight competency levels provide a more concrete analysis of what pupils and teachers can actually do and they also suggest instructional strategies relevant to pupils who are learning at each level of competence. Such descriptions are of great assistance for the construction of textbooks, the design of teacher in-service programmes, and the

development of general classroom teaching strategies – because all of these activities require a sound knowledge of the skills already acquired and the higher order skills that should be aimed at in order to transfer to the next stage of learning. These are presented below.

Reading Competency Levels

	Level	Descriptor	Competency
BASIC READING SKILLS	1	Pre-reading	Matches words and pictures involving concrete concepts and everyday objects.
	2	Emergent Reading	Matches words and pictures involving prepositions and abstract concepts.
	3	Basic Reading	Interprets meaning (by matching words and phrases, completing sentences).
	4	Reading for Meaning	Reads to link and interpret information located in various parts of the text.
	5	Interpretive Reading	Interprets information from various parts of the text in association with external information.
ADVANCED READING SKILLS	6	Inferential Reading	Reads to combine information from various parts of the text so as to infer the writer's purpose.
	7	Analytical Reading	Locates information in longer texts (narrative, document or expository) in order to combine information from various parts of the text so as to infer the writer's personal beliefs (value systems, prejudices and biases).
	8	Critical Reading	Reads from various parts of the text so as to infer and evaluate what the writer has assumed about both the topic and the characteristics of the reader

Mathematics Competency Levels

	Level	Descriptor	Competency
BASIC MATH SKILLS	1	Pre- Numeracy	Applies single step addition and subtraction.
	2	Emergent Numeracy	Applies a two-step addition and subtraction involving carrying.
	3	Basic Numeracy	Translates verbal information into arithmetic operations.
	4	Beginning Numeracy	Translates verbal or graphic information into simple arithmetic problems.
ADVANCED MATH SKILLS	5	Competent Numeracy	Translates verbal, graphic, or tabular information into an arithmetic form in order to solve a given problem.
	6	Mathematically Skilled	Solves multiple-operation problems (using the correct order) involving fractions, ratios, and decimals.
	7	Concrete Problem Solving	Extracts and converts information from tables, charts and other symbolic presentations in order to identify, and then solve multi-step problems
	8	Abstract Problem Solving	Identifies the nature of an unstated mathematical problem embedded within verbal or graphic information and then translate this into symbolic, algebraic or equation form in order to solve a problem.

Figure 7.1: The SACMEQ competency levels in reading and mathematics

c) Categories of reading and mathematics skills

For SACMEQ III two broad categories of reading skills were created: “Basic Reading” and “Advanced Reading”. “Basic Reading” comprised the first five levels and involved mainly mechanical reading skills that included:

- recognising and decoding words,
- matching individual words and phrases and extracting information directly from the text and
- reading forward and interpreting adjacent pieces of information.

"Advance Reading" was subsumed by the last three levels and involved mainly inferential reading for meaning from within and outside the text and included:

- interpreting and making inferences from different types of text,
- analysing detailed texts or extended documents for underlying messages and
- reading forward and backward making judgments about the assumptions, values and biases of the author.

Also, for mathematics two broad categories of mathematical skills were produced: "Basic Mathematics" which consisted of the first four levels and "Advanced Mathematics" which included the last four levels. "Basic Mathematics" competencies involve mainly manipulation of basic operations and recognition of shapes and figures. They included:

- applying single- to two-step addition or subtraction of whole numbers and basic fractions,
- recognising three-dimensional shapes and number units and
- translating simple textual/verbal information into basic arithmetic forms using whole numbers and fractions.

"Advanced Mathematics" encompassed problem solving skills which included:

- solving multiple-operation problems using the correct order of arithmetic operations on whole and mixed numbers, fractions, ratios, and decimals,
- extracting and converting information from tables, charts, visual and symbolic presentations in order to identify, and then solve multi-step problems and
- identifying the nature of an unstated mathematical problem embedded within verbal or graphic information, and then translating this into symbolic, algebraic, or equation form to solve the problem.

7.2 Pupil and teachers overall performance in reading and mathematics tests

In Table 7.1, the mean performance on the reading and mathematics tests for pupils and teachers are presented for the year 2000 and 2007. For example, the first row of Table 7.1 gives the result for the Central region with mean reading score and mean mathematics score of about 597 and 567 for pupils, and 796 and 881 for teachers, respectively, for the year 2000. For Seychelles as a whole, the mean reading score for pupils in 2007 was 575 and the mean mathematics scores was 551. For teachers, the mean for reading was 831 and for mathematics it was 823.

Compared to 2000, there was a slight decrease in pupils' performance on the reading and mathematics tests. For teachers, there was a noticeable increase in the mean score from 808 to 831 in reading, however, the decrease in the mean mathematics score was quite substantial - about 50 points.

Table 7.1: Mean performance on the reading and mathematics tests for pupils and teachers for 2000 and 2007

2000	PUPILS				TEACHERS			
	Reading		Mathematics		Reading		Mathematics	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	596.9	5.19	567.1	4.25	795.9	2.50	881.1	2.35
Eastern	560.4	8.47	551.5	8.13	800.6	3.43	840.0	1.64
Island	576.7	8.94	552.4	8.22	789.5	2.38	901.5	6.11
Northern	567.4	7.76	534.6	6.38	802.6	2.21	848.2	2.35
Southern	585.3	9.76	554.2	8.01	837.2	2.15	909.7	4.96
Western	585.0	9.47	550.0	7.96	842.7	1.51	857.2	1.66
SEYCHELLES	**582.0**	**8.74**	**554.3**	**2.68**	**807.5**	**1.14**	**872.6**	**1.30**

2007	PUPILS				TEACHERS			
	Reading		Mathematics		Reading		Mathematics	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Central	581.0	5.36	557.3	4.26	851.9	2.36	827.1	2.92
Eastern	574.9	8.90	548.0	7.01	842.7	3.34	817.1	3.35
Island	565.2	7.75	543.7	6.09	796.1	2.25	789.2	4.10
Northern	585.2	8.15	554.1	6.49	844.1	1.99	816.7	1.43
Southern	584.9	9.00	551.5	7.15	816.7	2.55	864.8	1.31
Western	550.3	9.67	539.1	6.79	792.3	3.29	823.4	2.59
SEYCHELLES	**575.1**	**3.10**	**550.7**	**2.45**	**830.8**	**1.15**	**823.1**	**1.23**

With regard to the regions, there was a decrease in the mean reading score for pupils in Central (15 points), Islands (11 points), and to a greater extent the Western region (35 points). On the other hand, Eastern and Northern registered an improvement in the mean reading score of 14 points and 18 points respectively. In mathematics, there was a decrease in the mean score from 2000 to 2007 in most regions. The only exception was in Northern region with an increase of almost 20 points. The decrease in Western region was by more than 10 points and perhaps more disturbing.

For teachers, there was an increase in the mean reading scores in most regions. However, for Southern and Western, there was a decrease of about 20 points and 50 points respectively. The picture was much bleaker for mathematics. The decrease in mean scores ranged from 23 points for the Eastern region to 112 points for Islands with equally quite disturbing figures for the Central (54 points) and Southern (45 points) regions.

As stated earlier, there has not been any significant change in the mean score in reading for pupils between SACMEQ II and SACMEQ III. And also as indicated, there has been a fair increase in pupils' mean score in the Eastern and Northern regions which could be attributed to action research projects in reading that happened in the same year when the data were collected.

It is to be noted in these projects, the SACMEQ competency levels were used as a framework for test construction and subsequent assessment, and this could have had a positive impact on the results for schools in these two regions. As for the overall improvement in the teacher reading scores across the regions, perhaps this can be explained by a heightened motivation level amongst teachers and parents to improve reading levels of pupils. This was evident in school-based professional development sessions that targeted reading and greater parental involvement.

Policy suggestions 7.1: With the introduction of the new reading scheme for primary schools, the Ministry of Education should consolidate the good practice in Eastern and Western regions and ensure that similar reading projects are initiated in the other regions

The results for mathematics were altogether a disappointment. Following the publication of the SACMEQ II report (Leste et al, 2005), the Ministry of Education was concerned about the large percentage of Primary 6 pupils who were still performing at the basic levels. This led to the design and implementation of Improving Pupils Achievements in Mathematics (IPAM) Project in 2003 under the aegis of the Mathematics Working Group (MWG, 2006) which was responsible to the National Curriculum Advisory Committee chaired by the Principal Secretary.

The MWG set itself the target of 50 percent of the pupils reaching at least Level 5 by the time they exited Primary 6. A longitudinal research was started in 2005 with a cohort of Primary 2 pupils and the MWG recommended the appointment of mathematics coordinators in all primary schools as front line curriculum leaders. They received training and support in various aspects of pedagogy and in the use of the SACMEQ competency levels as an instructional and assessment tool.

Two important developments that emanated from the IPAM Project were the introduction of the Mathematics Lesson Structure or MLS (MWG, 2006) which teachers used to sequence and structure their lesson plans with a clear focus on using pupils' prior knowledge and the development of conceptual understanding. Also, the development of the Primary Assessment Framework in Mathematics (Benstrong, 2008) which was largely influenced by the SACMEQ levels, the work done by National Council of Teachers of Mathematics in the United States (NCTM, 2000), the Attainment Targets from the UK (DfES, 2005), the assessment framework of TIMSS (TIMSS, 2003) and others. Linkages were made possible between the framework and different learning theories such as the Bloom's and Vygotsky's, and these were used as a basis for improving instruction in the classroom.

Unfortunately, the research cohort was not part of the SACMEQ III survey but nevertheless, it was expected that the positive spin-offs from the IPAM Project would have had a noticeable impact on pupils' achievement at all grade levels in primary. The slight decrease in the overall pupils' mathematics mean score was therefore unexpected. The positive performance of schools in the Northern region could be perhaps due to their

commitment towards the IPAM Project. It needs to be mentioned though that schools in that region tended to be small in size and perhaps the IPAM Project was more manageable and helped produced this commendable result.

Policy suggestion 7.2: The Ministry of Education should reconvene the Mathematics Working Group to evaluate the IPAM Project with particular focus on achievement levels and the quality of the mathematics lessons.

The decrease in the teachers' mathematics mean scores came also as a surprise. This might perhaps be another contributing factor to the decrease in the pupils' mean score as this would tend to suggest that the transfer of knowledge and skills from teachers to pupils was not as one would have wished.

Policy suggestion 7.3: The Ministry of Education should maintain its plan to ensure that all primary school teachers without a qualification in mathematics should follow in-service IGCSE core mathematics curriculum in order to improve their knowledge level.

7.3 Pupil reading and mathematics test scores by subgroups

As in SACMEQ II, results have been reported by gender, by school location and by a proxy measure of pupils' socioeconomic status (SES). The school heads in the SACMEQ II and III Projects were asked abut their perceptions regarding location of their schools. If the school heads said that their schools were "isolated' or 'rural" then such schools would be deemed to be located in rural areas. But if they said that their schools were "in a small town" or "in or near a large town or city" then their school would be considered to be located in urban areas.

Pupils socioeconomic status used in this document was derived from SACMEQ pupils SES scores (Dolata, 2005). "Low SES" and "High SES" were defined as pupils in the bottom quarter and pupils in the top quarter of SACMEQ's pupils SES scale within each country respectively. These scores were generated from pupils' responses to questions about home possessions, parental education, the quality of materials used to build homes, number of books at home and the source of lighting at home. The results have been presented in Table 7.2.

Table 7.2: Mean scores for the reading and mathematics tests for pupils by subgroup (SACMEQ II and SACMEQ III)

2000	PUPILS			
	Reading		Mathematics	
	Mean	SE	Mean	SE
Pupil gender				
Boys	549.7	4.33	535.5	3.68
Girls	614.2	4.13	573.1	3.76
School Location				
Rural	576.1	7.62	549.2	6.78
Urban	583.1	3.39	555.3	2.91
Socioeconomic Level				
Low SES (Bottom 25%)	545.7	5.07	519.9	4.75
High SES (Top 25%)	637.8	6.20	604.3	5.22
SEYCHELLES	**582.0**	**8.74**	**554.3**	**2.68**

2007	PUPILS			
	Reading		Mathematics	
	Mean	SE	Mean	SE
Pupil gender				
Boys	544.4	4.46	535.2	3.53
Girls	607.2	3.92	566.7	3.31
School Location				
Rural	571.6	5.65	550.2	4.56
Urban	576.7	3.71	550.9	2.91
Socioeconomic Level				
Low SES (Bottom 25%)	509.3	6.98	498.7	5.06
High SES (Top 25%)	628.5	6.01	593.6	5.25
SEYCHELLES	**575.1**	**3.10**	**550.7**	**2.45**

It can be observed that between 2000 and 2007, there was almost no change in the performance of boys in both reading and mathematics. For girls, there was a decrease of about seven points for both tests. More worrying, however, is that the difference in the performance between the two genders seemed to have remained the same from SACMEQ II to SACMEQ III. For instance, the difference was about 65 points in 2000 and about 63 points in 2007 in reading, both in favour of girls. In mathematics, the difference was 38 points in 2000 and 32 points in 2007.

For schools in both the Rural and Urban areas there was a slight decrease in the mean reading score and for mathematics - the change was marginal. It is pleasing to note that for both surveys, there were negligible differences in both reading and mathematics as far as school location was concerned and probably this was unique amongst the SACMEQ participating countries.

With regard to the two SES groups, the means scores in reading and mathematics decreased for both, with a more noticeable decrease for pupils with a low SES level. For instance, in reading the decrease was by 36 points for the low SES pupils compared to 9 points for pupils with high SES and in mathematics the decrease in the mean scores was 21 points and 11 points, respectively. Of more concern however, is that the gap between the performance of pupils with high SES and low SES has actually widened for reading and mathematics. For reading, the gap increased from 92 points to 119 points between 2000 and 2007 and for mathematics the change was from 84 points to 94 points.

While the difference in the performance between schools in the Rural and Urban areas appeared to be negligible, the same cannot be said about the difference in the performance between the two genders and between pupils with high SES and low SES. The issue of gender difference has remained persistent and an effective intervention programme by the Ministry of Education to redress this inequity has so far remained elusive. This gap in performance between the two genders has been observed even as early as in Primary 2 when pupils are first tested nationally in reading and mathematics.

Policy Suggestion 7.4: The Ministry of Education should re-consider previous initiatives of setting up a Gender Action Team (GAT) to discuss these results and devise action research strategies to address the issue of gender gap in achievement in primary schools.

Similarly, the widening of the gap in achievements between the two socioeconomic groups is disturbing. It is to be noted though, that Seychelles began to experienced serious economic difficulties in the early 2000s which necessitated the implementation of austerity measures even before the survey was conducted. The impacts of this economic

deterioration could have been felt more profoundly by pupils from poorer families and this emerging factor perhaps warrant further investigation.

***Policy Suggestion 7.5*:** The Student Welfare Section at the Ministry of Education should use the SACMEQ data to identify pupils in the low SES group who are underachieving and with the support of other agents such as social and health workers identify social or learning problems with a few to develop individualized plan to improve their learning conditions.

7.4 Pupil reading and mathematics levels

As indicated earlier, the competency levels derived from the SACMEQ study can provide quality information about what pupils and teachers can actually do. To reiterate, for both reading and mathematics, eight competency levels were identified with Level 1 the lowest and Level 8 the highest. The results for pupils are presented in Tables 7.3 and 7.4 and those for their teachers in Table 7.5.

As it can be seen in Table 7.3, there was not much change in the percentage of pupils at the different levels of competence between 2000 and 2007 for Seychelles as a whole, except perhaps for the slight increase of three percent at Level 6. For the regions, what was striking was the increase in the number of pupils at Level 8 in Eastern region. The percentage value rose by about 11.

As it can be observed there appeared to have been a slight shift in mathematics in the percentage of pupils at Levels 1 and 2 to level 4 between the two studies. This was encouraging despite a decrease in the overall mean score in mathematics, and again, this might have been due to the impact of the IPAM Project. This is another advantage of using the competency levels as a measure of achievement rather than using mean score alone.

From Table 7.5, it can be seen that teacher competence in reading was not an issue as only a small percentage of teachers was at Level 7 and the majority were performing at Level 8. In fact, the percentage at Level 8 increased slightly from 2000 to 2007, despite the drop in the percentage of teachers at Level 8 in the Western region.

However, in mathematics, it can also be seen that about 5 percent of the teachers were at Level 6 in 2007 and this was not the case in 2000. Also, compared to 2000, there were a larger percentage of teachers at Level 7 than at Level 8 and perhaps more worrying was the 20 percent drop in the number of teachers who performed at Level 8. The decrease at Level 8 was consistent across most regions with the exception of Southern.

However, in mathematics, it can also be seen that about 5 percent the teachers were at Level 6 in 2007 and this was not the case in 2000. Also, compared to 2000, there were a

larger percentage of teachers at Level 7 than at Level 8 and perhaps more worrying was the 20 percent drop in teachers who performed at Level 8 altogether. The decrease at Level was consistent across most regions with the exception of Southern.

7.5 "Advanced" reading and mathematics skills

As was described earlier, it was possible in SACMEQ III to generate two categories for reading and mathematics by collapsing the first five levels in reading to form the "Basic Skills" category and combining the last three levels to from the "Advanced Skills" category. For mathematics, the "Basic Skills" category comprised the first four levels and "Advanced Skill" category was made up of the last four levels. The percentages of pupils at the "Advanced Skills" level for reading and mathematics have been presented by regions in Figures 7.2 and 7.3. The same have been presented by gender, school location and SES in Table 7.6.

For Seychelles as a whole the percentage of pupils who had reached "Advanced Skills" in reading increased marginally from 2000 to 2007. There was noticeable increase in Northern and Southern regions and in Eastern region to a lesser extent, by 13, 12, and six percent, respectively. There was a drop of 14 percent in the Western region and this was somewhat disappointing as the region was one with highest percentage of pupils at the "Advanced Skills" reading level in SACMEQ II.

With regard to performance of pupils at the "Advanced Skills" level in mathematics the trend in almost all regions and in Seychelles as whole seemed to follow the slight decline mentioned previously. The decrease was larger in the Central and Islands regions. All the same, schools in the Northern region posted a slight increase of seven percent.

When the performances of the different subgroups in SACMEQ II and SACMEQ III are compared in terms of the percentage of pupils who reached "Advanced Skills", it can be observed that there was a very slight increase in reading for both genders while in mathematics there was no change in the performance of boys and about a five percent decrease for girls. The gap in the performance between the two genders remained at about 20 percent points in reading and at around 12 in mathematics in favour of girls. This was consistent across the two surveys.

The difference in performance between Rural and Urban was negligible for both SACMEQ II and III in reading and mathematics but however, when performance is performance is compared for SES, it can be observed that the gap was quite extensive – by over 30 percentage points in reading and mathematics for both surveys – despite a drop of about seven points between 2000 and 2007 for pupils with high SES.

7.6 Conclusion

When analysed from the perspective of competence levels, it would appear that in general, there has been a slight shift towards the higher levels in reading in particular. Even if this

was not as apparent in mathematics, there was nonetheless a shift from the lower levels to the middle levels.

Table 7.3: Percentage of pupils reaching various reading competence levels by region (SACMEQ II and SACMEQ III)

2000	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	2.9	0.73	7.9	1.20	6.4	1.08	11.7	1.42	13.8	1.51	13.0	1.48	20.6	1.78	23.6	1.74
Eastern	3.9	1.33	7.4	2.09	9.9	2.11	15.8	2.57	16.2	2.54	14.8	2.51	21.7	2.90	10.3	2.11
Island	1.8	1.05	5.5	1.13	8.6	2.22	14.4	2.73	17.5	2.95	19.9	3.14	22.3	3.27	9.9	2.37
Northern	2.4	0.98	8.5	1.82	12.4	2.10	15.4	2.29	13.4	2.17	13.4	2.18	19.5	2.52	15.0	2.28
Southern	3.9	1.40	6.0	1.83	11.5	2.37	9.9	2.21	16.4	2.74	13.1	2.51	21.8	3.08	17.4	2.76
Western	2.9	1.29	6.8	2.08	6.9	1.93	10.3	2.28	12.7	2.54	21.3	3.12	28.2	3.45	10.9	2.34
Seychelles	**3.0**	**0.44**	**7.4**	**0.68**	**8.8**	**0.74**	**12.8**	**0.86**	**14.6**	**0.91**	**15.0**	**0.93**	**21.8**	**1.07**	**16.7**	**0.93**

2007	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	4.3	0.92	7.7	1.20	11.2	1.42	8.9	1.28	11.2	1.41	15.5	1.63	22.1	1.88	19.2	1.61
Eastern	2.9	1.17	10.1	2.09	7.6	1.82	12.9	2.32	13.9	2.41	17.3	2.62	14.4	2.44	21.1	2.84
Island	5.6	1.62	2.5	1.13	10.7	2.21	15.7	2.60	11.7	2.29	22.3	2.91	22.3	2.98	9.1	2.07
Northern	2.8	1.13	7.5	1.82	9.9	2.05	6.6	1.69	12.6	2.29	20.8	2.75	21.5	2.80	18.4	2.66
Southern	5.1	1.66	6.2	1.83	9.6	2.23	7.4	1.97	7.9	2.02	20.3	3.03	28.2	3.41	15.2	2.69
Western	6.2	1.73	9.2	2.08	10.8	2.23	12.3	2.36	16.0	2.62	15.9	2.65	21.0	2.90	8.7	2.01
Seychelles	**4.4**	**0.53**	**7.4**	**0.68**	**10.2**	**0.79**	**10.3**	**0.79**	**12.1**	**0.84**	**18.0**	**0.99**	**21.5**	**1.07**	**16.2**	**0.92**

Table 7.4: Percentage of pupils reaching various mathematics competence levels by region (SACMEQ II and SACMEQ III)

2000	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	1.7	0.57	16.2	1.61	22.3	1.81	20.3	1.77	17.1	1.66	15.6	1.53	5.3	0.97	1.6	0.55
Eastern	2.9	1.19	24.7	3.02	19.7	2.75	20.6	2.84	11.9	2.26	9.9	2.09	8.9	2.00	1.5	0.84
Island	2.5	1.23	23.8	3.26	23.7	3.36	14.9	2.83	13.0	2.61	17.3	2.96	3.7	1.50	1.2	0.85
Northern	4.4	1.31	22.0	2.63	28.3	2.88	17.7	2.41	14.6	2.25	9.3	1.81	2.8	1.06	0.8	0.59
Southern	3.9	1.41	17.5	2.83	27.3	3.32	17.6	2.78	12.0	2.38	14.7	2.62	5.4	1.68	1.6	0.93
Western	0.6	0.56	21.8	3.17	26.4	3.34	26.0	3.33	7.5	20.2	11.5	2.43	4.0	1.47	2.3	1.13
Seychelles	**2.6**	**0.41**	**20.0**	**1.03**	**24.2**	**1.11**	**19.7**	**1.03**	**13.8**	**0.89**	**13.3**	**0.86**	**5.0**	**0.56**	**1.5**	**0.31**

2007	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	1.6	0.57	16.3	1.65	23.6	1.89	24.7	1.95	13.5	1.55	14.3	1.56	4.4	0.90	1.7	0.59
Eastern	2.4	1.07	16.3	2.58	24.0	2.98	27.9	3.13	11.5	2.23	13.5	2.38	2.4	1.07	2.0	0.96
Island	1.0	0.72	14.2	2.50	30.9	3.27	25.9	3.13	12.2	2.33	15.2	2.57	0.5	0.51	0.0	0.00
Northern	2.4	1.04	14.1	2.42	22.6	2.85	26.3	3.02	18.8	2.71	14.1	2.37	0.9	0.66	0.9	0.66
Southern	2.8	1.25	16.4	2.80	18.0	2.86	28.8	3.43	16.9	2.83	15.3	2.69	1.1	0.79	0.6	0.56
Western	1.5	0.68	18.0	2.77	28.7	3.27	27.7	3.22	14.9	2.55	5.6	1.64	1.5	0.88	2.1	1.02
Seychelles	**1.9**	**0.35**	**15.9**	**0.95**	**24.5**	**1.11**	**26.4**	**1.15**	**14.4**	**0.91**	**13.2**	**0.87**	**2.4**	**0.39**	**1.3**	**0.30**

Table 7.5: Percentage of teachers reaching various reading competence levels by region (SACMEQ II and SACMEQ III)

	Reading						Mathematics					
2000	Level 6		Level 7		Level 8		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	0.0	0.00	16.0	1.48	84.0	1.48	0.0	0.00	16.0	1.48	84.0	1.00
Eastern	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	42.3	2.24	57.7	2.24
Island	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	28.6	2.60	71.4	2.60
Northern	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	33.5	2.90	66.5	2.90
Southern	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	19.0	2.55	81.0	2.55
Western	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	14.0	0.00	86.0	0.00
Seychelles	**0.0**	**0.00**	**5.8**	**0.53**	**94.2**	**0.53**	**0.0**	**0.00**	**24.1**	**0.80**	**75.9**	**0.80**

	Reading						Mathematics					
2007	Level 6		Level 7		Level 8		Level 6		Level 7		Level 8	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	0.0	0.00	0.0	0.00	100.0	0.00	4.6	0.86	39.1	1.08	56.3	1.38
Eastern	0.0	0.00	0.0	0.00	100.0	0.00	12.3	1.71	45.9	2.77	41.8	2.18
Island	0.0	0.00	0.0	0.00	100.0	0.00	11.1	1.96	42.1	2.05	46.8	2.84
Northern	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	61.0	2.54	39.0	2.54
Southern	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	8.4	1.72	91.6	1.72
Western	0.0	2.46	18.0	2.46	82.0	2.46	0.0	0.00	34.6	2.29	65.4	2.29
Seychelles	**0.0**	**0.33**	**2.4**	**0.33**	**97.6**	**0.33**	**4.8**	**0.45**	**39.4**	**8.79**	**55.8**	**0.84**

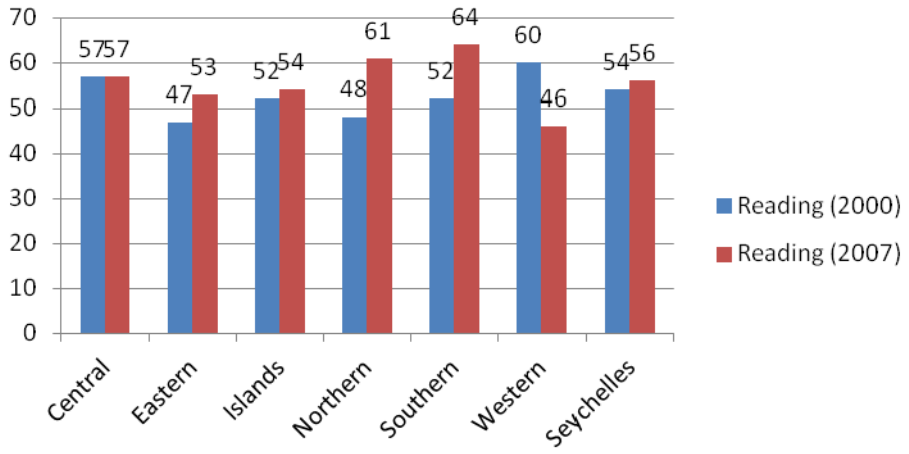

Figure 7.2: Percentage of pupils at "Advanced Skills" in reading by region for SACMEQ II and SACMEQ III

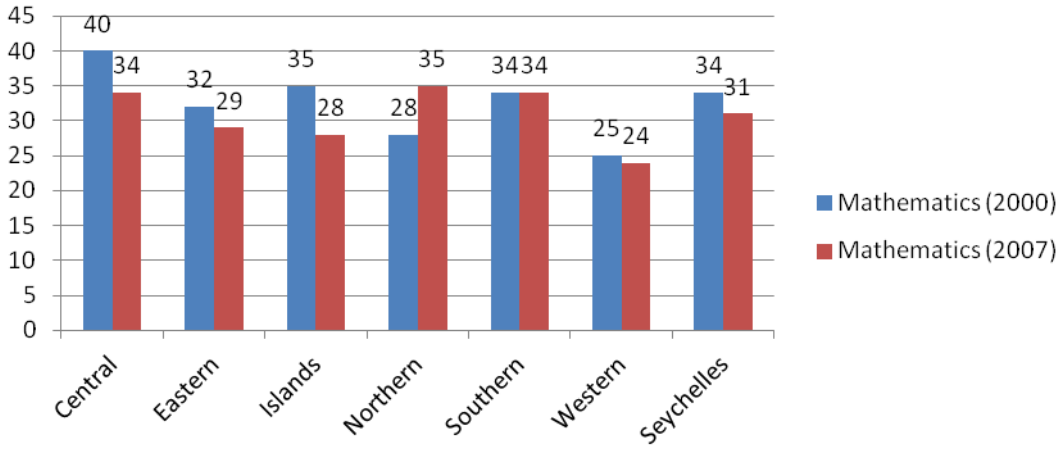

Figure 7.3: Percentage of pupils at "Advanced Skills" in mathematics by region for SACMEQ II and SACMEQ III

Table 7.6: Percentage of pupils with "Advanced Skills" in reading and mathematics by subgroup for SACMEQ II and SACMEQ III

Sub-Grouping	2000		2007	
	Reading	Mathematics	Reading	Mathematics
	%	%	%	%
Pupil gender				
Boys	43	26	45	25
Girls	64	42	67	37
School Location				
Rural	55	27	56	30
Urban	53	35	56	32
Socioeconomic Level				
Low SES (Bottom 25%)	42	19	40	17
High SES (Top 25%)	79	54	71	47
SEYCHELLES	**54**	**34**	**56**	**31**

The performance of pupils in schools in Western region in particular seemed also to be a point of concern. For SACMEQ III, the region lowest mean score and the lowest percentage of pupils at the "Advanced Skills" level in both reading and mathematics.

The performance of teachers in mathematics might be a point for consideration as the percentage that performed at the highest level decreased significantly. There might be a need to check the qualifications of new teacher intake and also review the way teachers of mathematics are deployed in primary schools.

The wide discrepancies in the percentage of pupils at the "Advanced Skills" in both reading and mathematics pose serious equity questions especially in the contexts of the gender and socioeconomic status of the pupils. It was clear that for both subgroups, the difference was unacceptably high.

Chapter 8
Knowledge about HIV and AIDS

8.1 Introduction

The HIV-AIDS pandemic has presented major challenges to governments around the world – especially in Southern and Eastern Africa. It has affected the economic development of nations. It has had a negative impact on health care and social development. It has created fear and apprehension in communities and societies.

In Seychelles, there has been a substantial increase in the number of HIV and AIDS cases since the first case of HIV infection was reported in 1987 (Seychelles, 2010). This trend has been linked with reported increase in high risk behaviours amongst young adults which have triggered of an alarming rate of HIV infection (from 0.3% to 0.7% in 2009) in the population between the ages of 15-49. Moreover, from January to March 2011, out of 33 new cases, eight were children under the age of 15 (Ministry of Health, April 2011). This situation has led to enhanced co-operation among regional and international organizations to devise strategies to reverse the upward trend of HIV infection (National AIDS Council, 2005). This co-operation has recognized the importance of effective HIV-AIDS prevention education programmes that are targeted towards young people. It has also emphasized the need to understand broader issues associated with HIV-AIDS especially for children on the threshold of adulthood and the teachers who teach them.

In this chapter some issues of HIV-AIDS have been examined to provide information that can contribute to prevention education programmes. These include knowledge levels of pupils and teachers, attitudes of pupils to care and support, self perceptions of the risk of catching the infection, and the HIV-AIDS curriculum in primary schools.

a) The assessment of pupil and teacher knowledge about HIV-AIDS

In 2006 SACMEQ's Governing Body (the SACMEQ Assembly of Ministers of Education) expressed concern about the need for a well-designed indicator that could be used to guide informed debate about the effectiveness of HIV and AIDS prevention education programmes. The one indicator that had been widely used to judge these programmes (known as the "United Nations General Assembly (UNGASS) HIV-AIDS Knowledge Indicator for Young People") was considered to lack validity because it was based on a short list of five test questions that were problematic in terms of wording complexity, content coverage, and reliability. The SACMEQ Ministers asked the SACMEQ III Project Research Teams to develop a valid SACMEQ HIV-AIDS Knowledge Test that would be suitable for administration to Primary 6 pupils and their teachers (known as the "HAKT").

HAKT was designed to provide a valid assessment of pupil and teacher knowledge about HIV and AIDS with respect to the topics specified in official school curriculum frameworks, textbooks, and teaching materials used by the SACMEQ countries. In Seychelles reference was made to the Personal and Social Education curriculum within which health-related topics are included (such as HIV-AIDS).

The 86 HAKT test items covered 43 curriculum topics, and they were focused o an assessment of "the basic knowledge about HIV and AIDS that is required for protecting and promoting health". These topics were grouped into five main areas: definitions/terminology; transmission mechanisms; avoidance behaviours; diagnosis/treatment; and myths/misconceptions.

The performance of pupils and teachers on the HAKT was assessed by applying two scoring procedures:
(a) "**HAKT Scores**"- these were Rasch-scaled scores on the HAKT that were transformed to a SACMEQ overall Standard 6 pupil average of 500 and standard deviation of 100.
(b) "**HAKT Minimum Knowledge Scores**"- these were dichotomous scores that indicated whether pupils or teachers reached (score=1) or did not reach (score=1) SACMEQ's "minimal" HIV and AIDS knowledge benchmark (defined as mastery of half of the official curriculum assessed by the HAKT
© "**HAKT Desirable Knowledge Scores**" – these were dichotomous scores that indicated whether pupils or teachers reached (score=1) or did reach (score=1) SACMEQ's "desirable" HIV and AIDS Knowledge benchmark (defined as mastery of half of the official curriculum assessed by the HAKT).

Table 8.1: Mean performance on the HAKT of pupils and teachers and percentages of pupils and teachers reaching the minimum and desirable levels of knowledge about HIV and AIDS

Regions	PUPILS						TEACHERS					
	Transformed Score		Reaching minimum level		Reaching desirable level		Transformed Score		Reaching minimum level		Reaching desirable level	
	Mean	SE	%	SE	%	SE	Mean	SE	%	SE	%	SE
Central	477.9	3.30	19.9	1.79	2.3	0.68	802.0	6.46	95.6	0.80	95.6	0.80
Eastern	489.2	5.90	28.4	3.08	4.3	1.41	769.5	1.66	100.0	0.00	100.0	0.00
Island	505.7	5.30	33.0	3.36	3.1	1.23	791.2	6.92	100.0	0.00	100.0	0.00
Northern	501.4	5.15	27.7	3.08	3.7	1.30	761.2	3.14	100.0	0.00	100.0	0.00
Southern	501.9	5.67	34.4	3.53	3.4	1.34	833.2	7.97	100.0	0.00	91.6	1.72
Western	463.2	5.50	18.0	2.76	1.0	0.73	763.1	4.72	100.0	0.00	82.0	2.46
Seychelles	**487.5**	**1.98**	**25.4**	**1.12**	**2.8**	**0.43**	**788.4**	**2.60**	**98.5**	**0.27**	**95.1**	**0.47**

The scores on the HAKT for Primary 6 pupils and their teachers have been presented in Table 8.1. Three sets of figures have been presented in Table 8.1 for Pupils and teachers: (a) the Average HAKT Scores, (b) the Average HAKT Minimal Level Scores (expressed as a percentage), and (c) the Average HAKT Desirable Level Scores (also expressed as a percentage). For example, the first row of figures in Table 8.1 indicated that in Central region the Average HAKT Scores for pupils and teachers were 477.9 and 802.0 respectively, b) the percentages of pupils and teachers that reached the minimal level of knowledge on the HAKT were 19.9 and 95.6 percent, respectively, and c) the percentages of pupils and teachers that reached the desirable level of knowledge were 2.3 and 95.6 percent, respectively.

b) Pupil Knowledge

The results presented in the first column of Table 8.1 showed that Primary 6 pupil Average HAKT Scores ranged from a low of 463 in Western region to a high of 505 in the Islands region, and that the average score for pupils in Seychelles was 487 just below the SACMEQ overall average of 500.

When these average scores were considered on their own, they suggested that pupil knowledge levels about HIV-AIDS were "satisfactory" because they were fairly close to the overall SACMEQ average. However, an examination of the average HAKT Minimal Knowledge Scores suggested the need for a dramatically different conclusion!

It was expected that 100% of pupils in all SACMEQ countries should reach the minimum knowledge level. The second column of Table 8.1 contains the average HAKT Minimal Knowledge Scores for Primary 6 pupils. The results showed that: (a) the percentage of pupils with minimal knowledge ranged from a low of 18 percent in Western region to a slightly higher level of 34 percent in Southern region, and (b) the percentage of pupils in Seychelles that reached the minimum knowledge level was a quite low value of 25 percent.

That is, the percentages of pupils reaching the minimum knowledge level were far below the expectation of 100% for Seychelles overall and each of its regions. Most importantly, these figures showed that for Seychelles overall three-quarters of Primary 6 pupils had not reached the minimum knowledge level.

An even gloomier picture emerged when desirable levels of knowledge were considered. The average HAKT Desirable Knowledge Scores ranged from one percent in Western region to four percent in Eastern region, and the average for Seychelles was approaching only four percent. If this percentage for Seychelles was to be converted into figures, one can be quite shocked to find out that only about 50 pupils at the end of primary schooling had mastered at least 75% of the HIV- AIDS curriculum that was assessed by HAKT.

The results described above are alarming because a very large percentage of Primary 6 pupils lack the minimal knowledge about HIV-AIDS that is required for protecting and promoting health.

Policy Suggestion 8.1: The Ministry of Education should ask the Centre for Curriculum Assessment and Teacher Support to carry out an overall review of the HIV and AIDS curriculum.

c) Teacher Knowledge

In the fourth, fifth and sixth columns of Table 8.1, the average HAKT Scores, the average HAKT Minimal Knowledge Scores, and the average HAKT Desirable Knowledge Scores for teachers have been presented for Seychelles and its education regions. The figures showed that the national average HAKT Score reached a value of 788 – almost 300 points above the pupil average score. At regional level, the average HAKT Score was in the range of around

760 to 830. In addition, the percentages of teachers that reached SACMEQ's minimal knowledge benchmark of mastering at least one half of the official school curriculum were around 100% for all the education regions. Similarly, the percentages of teachers that reached SACMEQ's desirable knowledge benchmark of mastering at least three-quarters of the official curriculum were also very high – ranging between 80 percent to 100 percent (with half of the regions reaching 100%).

It is evident that there is a major contrast between the very high knowledge levels of teachers and the very low knowledge levels of their Primary 6 pupils. This came as a complete surprise to the SACMEQ Research Teams. They had assumed that teachers with high levels of basic knowledge about HIV-AIDS should be able to transmit this important information to their pupils. This assumption was obviously faulty and certainly requires further research in order to provide an explanation for the substantial "knowledge gap" between pupils and teachers.

Policy Suggestion 8.2: The Centre for Curriculum Assessment and Teacher Support should organize a series of discussion meetings for school heads and teachers in order to make them more aware of the research results arising from the SACMEQ III Project, and to explore solutions to the issue of the large gap between teacher and pupil knowledge about HIV-AIDS.

8.2 Demographic variations in pupil knowledge

The SACMEQ data provided information on pupil performance on the HAKT on three demographic variables: socioeconomic status (SES), gender, and school location. School location (based on a rural/urban dichotomy) was derived from Head Teacher Questionnaire and SES (based on an above/below average dichotomy) was generated from pupil SES score as explained in Chapter 2. This allows further exploration of the data to determine the importance of these variables in explaining the pupil results on the HAKT.

a) Socioeconomic Status

In Table 8.2 the HAKT average HAKT Scores and the percentages of pupils reaching the minimum and desirable knowledge levels for the two socioeconomic groups have been presented by regions. For example, in the first row the mean scores of pupils in Central region were 436 for those in the "low SES" and 499 for those in the "High SES" group; and the percentages of pupils reaching the minimum and desirable knowledge levels for high and low SES groups were 5, 29, 0, and 3 percent, respectively. For Seychelles overall the wealthier pupils were scoring higher on the HAKT (with a mean of 509 compared to 453) and a higher percentage of them have reached the minimum (34% compared to 11%) and desirable (5% compared to 0.8%) knowledge levels, That is, wealthier pupils had a better knowledge of HIV-AIDS, and they were scoring about fifty score points higher than pupils from poorer home background. More importantly, when the percentage of pupils reaching the minimum and desirable knowledge levels was examined, the advantage of the "High SES" group pupils became more prominent. There were three times as many pupils from the "High SES" group that had reached the minimum knowledge level and almost seven times that had reached the desirable knowledge level.

Table 8.2: Mean performance on the HAKT of pupils by socioeconomic status

Regions	PUPILS											
	Transformed scores				Reaching minimum level				Reaching desirable level			
	Low SES		High SES		Low SES		High SES		Low SES		High SES	
	Mean	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE
Central	436.3	7.33	499.2	6.21	5.5	2.68	29.2	3.70	0.0	0.00	3.3	1.46
Eastern	466.8	13.76	520.7	12.81	15.7	6.65	43.6	7.48	3.2	3.20	8.8	4.25
Island	466.0	8.14	504.3	21.29	12.0	4.68	35.1	11.24	0.0	0.00	10.1	7.05
Northern	478.5	11.38	520.6	10.32	20.4	6.58	36.5	6.82	2.6	2.58	5.7	3.25
Southern	453.1	14.82	533.0	13.39	16.1	6.79	40.5	9.70	0.0	0.00	7.4	5.26
Western	430.0	11.01	502.3	15.44	2.7	2.74	32.4	8.06	0.0	0.00	5.9	4.15
Seychelles	**453.1**	**4.26**	**508.9**	**4.38**	**11.1**	**1.94**	**33.9**	**2.61**	**0.8**	**0.55**	**5.4**	**1.25**

Regional variations in the percentage of pupils reaching the minimum and desirable level of knowledge are also worth noting. For example, in three regions Central, Western and to some extent Island the percentage of pupils from "Low SES" reaching minimum and desirable level of knowledge were abysmally low when compared to pupils from "High SES". In Island region there were around three times as many pupils that reached the minimum knowledge level from the higher socioeconomic group when compared to the lower group. In Central the situation was worse still with the wealthiest pupils who reached the minimum level of knowledge outnumbering the poorer pupils by about six times. Moreover, in all the three regions including Southern there was not one single pupil in the "Low SES" group that had reached the desirable level of knowledge on the HAKT.

The differences in knowledge levels of the two groups can be explained by the usual socioeconomic advantages of wealthier pupils whose achievement levels are generally higher than those of the poorer pupils. However it will be necessary to find out what could be happening in schools in those regions in which a large proportion of the poorer pupils have not got the basic health-promoting knowledge about HIV-AIDS, and some of those inequalities between regions would need to be addressed.

Policy Suggestions 8.3: The Ministry of Education should find out why there is such a large gap in knowledge levels about HIV and AIDS for pupils from wealthy and poor home backgrounds who located in Island, Western, and Central regions.

b) Gender

Differences between the two gender groups were also examined in Table 8.3. The average HAKT Scores for boys and girls (columns 2 and 4) and the percentages of boys and girls who had achieved the minimum (columns 5 and 7) and desirable (columns 7 and 9) levels of the HAKT have been presented by educational regions. An inspection of the table provides two main pieces of information: (a) that the average HAKT Score for Seychelles overall is somewhat higher for girls than it is for boys (bottom row column 2 and 3); (b) that in all regions girls' knowledge levels exceeded those for boys.

Table 8.3: Mean Performance on the HAKT of pupils by gender

Regions	PUPILS											
	Transformed score				Reaching minimum level				Reaching desirable level			
	Boys		Girls		Boys		Girls		Boys		Girls	
	Mean	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE
Central	469.9	4.64	486.0	4.83	18.0	2.47	21.8	2.63	1.7	0.83	2.9	1.08
Eastern	477.7	7.77	500.7	8.87	22.9	4.13	33.9	4.58	2.9	1.64	5.8	2.30
Island	490.9	8.01	521.3	6.58	30.7	4.63	35.4	4.93	3.0	1.71	3.1	1.80
Northern	493.2	6.76	510.9	7.84	23.4	3.96	32.6	4.82	0.8	0.85	7.1	2.61
Southern	493.6	8.31	509.7	8.02	26.8	4.78	41.7	5.19	3.5	1.98	3.3	1.89
Western	455.0	7.18	472.6	8.45	14.5	3.49	22.0	4.39	1.0	0.98	1.1	1.11
Seychelles	**478.0**	**2.75**	**497.4**	**2.90**	**21.7**	**1.50**	**29.3**	**1.68**	**2.0**	**0.51**	**3.7**	**0.71**

For the percentage of girls and boys reaching the minimum level of knowledge, the percentages for girls were slightly higher than for boys at both national and regional levels. Some regional variations in the magnitude of this difference were detected across regions. For example, there were over 10 percent more girls who had reached the minimum level of knowledge in Eastern and Southern regions.

As for the percentage of boys and girls reaching the desirable level the figures were quite low - as indicated earlier. However, the overall percentage of boys reaching the desirable level of knowledge was almost half that of the girls. In Northern region less than one percent of boys have reached the desirable level of knowledge. A better understanding of how boys and girls receive and process information about HIV-AIDS may be useful for programme developers.

Policy suggestion 8.4: The Centre for Curriculum Assessment and Teacher Support should take a leading role in monitoring those gender differences overtime and link with teacher trainers at the University of Seychelles to make possible adjustments to HIV-AIDS programme to ensure more equitable knowledge outcomes.

c) School Location

The average HAKT Scores for pupils, the percentages of pupils reaching the minimum and desirable levels of HIV-AIDS knowledge have been presented in Table 8.4. The figures for Seychelles overall, shown in the bottom row there was very little difference between rural and urban schools. Pupils from rural schools were scoring slightly higher on the knowledge level measure (a difference of three points) and there was a slightly larger percentage of pupils reaching the minimum level in schools in rural areas. One region which stood out was Western region where pupils in rural schools were scoring around 30 points below the Seychelles average. In that region there was the lowest percentage of pupils in urban schools who had reached the minimum knowledge level. A follow-up of the situation in Western region may be necessary.

Table 8.4: Performance on the HAKT of pupils by school location

Regions	PUPILS											
	Transformed scores				Reaching minimum level				Reaching desirable level			
	Rural		Urban		Rural		Urban		Rural		Urban	
	Mean	SE	Mean	SE	%	SE	%	SE	%	SE	%	SE
Central	0.0	0.00	477.9	3.30	0.0	0.00	19.9	1.79	0.0	0.00	2.3	0.68
Eastern	502.5	8.50	473.2	8.05	35.7	4.55	19.6	4.03	4.5	1.96	4.1	2.04
Island	505.2	8.54	505.9	6.62	32.2	6.14	33.3	4.01	1.7	1.69	3.6	1.60
Northern	513.1	10.30	498.7	5.87	23.8	6.93	28.5	3.43	0.0	0.00	4.6	1.59
Southern	514.4	9.67	492.5	6.78	41.2	5.60	29.4	4.53	6.6	2.86	1.0	0.98
Western	460.3	5.92	488.0	14.26	17.3	2.88	23.8	9.52	1.2	0.82	0.0	0.00
Seychelles	**489.8**	**3.72**	**486.4**	**2.33**	**28.2**	**2.06**	**24.2**	**1.33**	**2.8**	**0.77**	**2.9**	**0.52**

8.3 Attitudes to HIV-AIDS

Much effort in the fight against HIV- AIDS has focused on reversing the negative and prejudicial attitudes towards the syndrome itself and towards those who have been infected. A major impediment to attitude change is a lack of information on current attitudinal orientation to HIV -AIDS. It was possible in the SACMEQ III Project to gauge the attitudes to HIV - AIDS of the primary school community. Pupils, teachers, and school heads were asked to respond to several attitudinal statements in relation to HIV-AIDS.

a) Fear of casual contact with pupil infected by HIV

For the first statement they were asked if a pupil who had been infected with HIV should be allowed to continue to attend school. They had to choose between "No", "Yes" or "Not Sure". The percentage of pupils', teachers' and school heads' responses have been displayed in Table 8.5 for the six education regions. For example, in the first row of figures, the percentages of pupils saying "N0", "Yes" and "Not Sure" were 45, 22 and 33, respectively. In the same way, the percentages for teachers were zero, 10 and 90 percent, and similarly for school heads percentages of zero, 10 and 90 were recorded.

The most striking finding from Table 8.5 was the difference between the teachers' and school heads' attitudes on the one hand and the pupils' attitude on the other. Almost all school heads (92%) and most teachers (87%) made a positive response. In contrast, only about one-third of the pupils (33%) were positive about allowing a pupil who had been infected with HIV to continue to attend school. Moreover, there was considerable variation in the degree of responses by pupils between regions – ranging from 42 percent in Eastern to 27 percent in Northern. It would be useful to find out some of the factors that might explain pupils' negative attitudes in Northern and Central regions, where about half of the pupils seemed to fear casual contact with infected pupils.

The stigmatization of an HIV infected person is quite common and to some extent it may be related to the extent of the knowledge one has. Although we may be able later in this report to explore the relationship between pupil knowledge about HIV and AIDS and attitudes to HIV and AIDS, a comment can be made here about teachers from the results in Table 8.5. We know from HAKT scores in the section above that almost 100 percent of teachers had reached the desirable level of knowledge. However, there was about 52 percent of teachers in the

Western region who were not sure about allowing a pupil with HIV to attend school. One poses the question: why is it that half of the teachers in that region are so unsure? It may be possible that this uncertainty is a biased response as teachers have the knowledge and they know that they should not be prejudicial of a pupil who may be infected with HIV. The same arguments can be made for the school heads (about 17 % in Northern and 18% percent in Western) who were unsure if an infected pupil should carry on with schooling.

b) Discrimination against a person living with HIV or AIDS

Another social impact of the HIV-AIDS pandemic is the discrimination against persons living with HIV-AIDS. This tends to lead to isolation and neglect. In order to find out how widespread this was amongst pupils they were asked two questions about their behaviour towards a friend infected with HIV and about whether they would be willing to care for a relative who is ill with AIDS. For the first question the pupils had to indicate: (a) whether they would avoid or shun the person, (b) whether they were not sure how they would behave, or (c) whether they would treat the person in the same way as before the illness or whether they would be more friendly with that person. For the second question the pupils had to indicate whether: (a) they would "not" be willing to care for a sick relative, (b) they were unsure of what they would do, or (a) they would be willing to provide care.

The percentage of pupils opting for the three categories of responses for Seychelles and the six education regions can be examined in Table 8.6. The results in the first column show that the percentage of pupils who would avoid or shun a friend infected with HIV ranged from 10 percent in Eastern region to 15 percent in Southern region. These were very similar to the results in the fourth column which indicated that the percentage of pupils who said that they were **not** willing to care for a relative with AIDS. What was more revealing was the number of pupils who were not sure if they would behave positively towards a friend infected with HIV or avoid him or her. On average more than half of the pupils were not sure (54%). These pupils added to those who said outright that they would avoid or shun the friend represent more than two-thirds of pupils who may be harbouring discriminatory feelings towards persons infected with HIV.

In the third and fifth column the percentage of pupils listed by regions with positive behaviour provided an indicator of a caring attitude to persons living with HIV-AIDS. The average percentage of pupils with positive behavior was rather low for the country as a whole (32%) with very little variation among regions (around 10 percentage points). On the other hand, there were a substantial minority of pupils (45% overall) who indicated their willingness to care for a relative who was ill with AIDS. Interestingly enough, regional variations were more pronounced from a low of 30 percent in Western region to a high of 56 percent in Southern region. It should be noted that a relatively smaller percentage of pupils said that they would behave positively towards a friend infected with HIV whereas a somewhat larger number would care for a relative with AIDS. These results were somewhat disappointing as they indicated that there was still much work to be done to reduce discriminatory behavior towards persons with HIV-AIDS.

Table 8.5: Percentages of pupils, teachers and school heads expressing fear of casual contact with a pupil infected with HIV

Regions	RESPONSES ON THE POSSIBILITY OF A PUPIL INFECTED WITH HIV TO COTNINUE TO ATTEND SCHOOL																	
	PUPILS						TEACHERS						SCHOOL HEADS					
	No		Not Sure		Yes		No		Not Sure		Yes		No		Not Sure		Yes	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	44.6	2.15	22.3	1.89	33.1	2.04	0,0	0,0	10.4	1.20	89.6	1.20	0,0	0,0	9.9	0.00	90.1	0.00
Eastern	30.9	3.15	26.3	2.96	42.8	3.27	0,0	0,0	22.9	2.70	77.1	2.70	0,0	0,0	0.0	0.00	100.0	0.00
Island	34.9	3.28	36.6	3.42	28.5	3.21	0,0	0,0	0.0	0.00	100.0	0.00	0,0	0,0	0.0	0.00	100.0	0.00
Northern	46.4	3.15	26.6	2.97	27.1	2.98	0,0	0,0	0.0	0.00	100.0	0.00	0,0	0,0	17.0	0.00	83.0	0.00
Southern	35.6	3.62	26.6	3.34	37.9	3.68	0,0	0,0	0.0	0.00	100.0	0.00	0,0	0,0	0.0	0.00	100.0	0.00
Western	30.8	3.27	41.1	3.43	28.1	3.12	0,0	0,0	51.9	2.92	48.1	2.92	0,0	0,0	18.2	0.00	81.8	0.00
SEYCHELLES	**38.8**	**1.21**	**28.3**	**1.15**	**32.9**	**1.18**	**0,0**	**0,0**	**13.5**	**0.67**	**86.5**	**0.67**	**0,0**	**0,0**	**8.1**	**0.00**	**91.9**	**0.00**

Table 8.6: Percentages of pupils refusing contact with a person living with HIV or AIDS

Regions	PUPIL BEHAVIOUR WITH A FRIEND INFECTED WITH HIV						PUPIL WILLING TO CARE FOR A RELATIVE ILL WITH AIDS					
	Avoid/ shun him or her		Not sure		Positive attitude		No		Not sure		Yes	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	17.8	1.72	51.5	2.25	30.7	2.07	15.7	1.61	41.8	2.21	42.5	2.17
Eastern	10.1	2.09	56.8	3.33	33.0	3.16	18.5	2.57	32.4	3.11	49.2	3.17
Island	10.2	2.16	62.0	3.38	27.9	3.14	14.7	2.48	38.1	3.46	47.2	3.57
Northern	11.3	2.15	53.4	3.42	35.2	3.28	15.6	2.43	34.6	3.02	49.8	3.19
Southern	14.7	2.68	48.1	3.77	37.3	3.65	15.8	2.67	28.3	3.37	55.8	3.66
Western	13.8	2.49	57.5	3.53	28.7	3.24	16.9	2.58	52.8	3.50	30.3	3.32
Seychelles	**13.9**	**0.89**	**54.3**	**1.28**	**31.8**	**1.20**	**16.1**	**0.93**	**38.8**	**1.23**	**45.1**	**1.24**

Table 8.7: Self risk assessment of being infected with HIV by teachers and school heads

Regions	SELF HIV RISK ASSESSMENT											
	TEACHERS						SCHOOL HEADS					
	No/ Low Risk		Medium Risk		High/Very High Risk		No/ Low Risk		Medium Risk		High/Very High Risk	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Central	75.4	1.80	14.6	1.43	10.0	1.09	100.0	0.00	0.0	0.00	0.0	0.00
Eastern	100.0	0.00	0.0	0.00	0.0	0.00	75.8	0.00	24.2	0.00	0.0	0.00
Island	76.0	2.05	24.0	2.05	0.0	0.00	100.0	0.00	0.0	0.00	0.0	0.00
Northern	98.6	0.00	1.4	0.00	0.0	0.00	38.5	0.00	44.5	0.00	17.0	0.00
Southern	84.8	2.52	0.0	0.00	15.2	2.52	78.7	0.00	21.3	0.00	0.0	0.00
Western	100.0	0.00	0.0	0.00	0.0	0.00	100.0	0.00	0.0	0.00	0.0	0.00
Seychelles	**86.6**	**0.72**	**8.3**	**0.55**	**5.1**	**0.47**	**85.2**	**0.00**	**12.3**	**0.00**	**2.4**	**0.00**

c) Risk perception about HIV and AIDS

Part of the approach to gaining a better understanding of behaviors associated with the transmission of HIV is to obtain a better assessment of self perception of high risk behavior. In the SACMEQ III Project the teachers and school heads were asked to assess their risk of being infected with HIV. They had to choose among three categories of response: "No/Low/Risk", "Medium Risk" and "High/Very High Risk". Table 8.7 contains the results by education regions. For example, in Western region, all teachers and school heads perceived themselves as having no or low risk of becoming infected with HIV. The percentage of teachers varied amongst regions from 100 percent in Western and Eastern to about 75 percent in Central region. For school heads it ranged from about 38 percent in Northern and 100 percent in Central, Island, and Western.

Overall, the self perception of over eighty-five percent of teachers and school heads were that they ran no or low risk of being infected. This could be interpreted that they did not see themselves as engaging in behaviors that would place them at risk. However, notable regional variations can be observed. For example, for school heads in the Northern region only about one-third of the school heads perceived themselves as running no or low risk of becoming infected. More personal information would be needed to investigate the risk environment in Northern region in which over 40 percent of school heads saw themselves at medium risk, and over 15 percent at high risk of being infected with HIV.

For the teachers the percentages in the "No/Low Risk" groups did not vary as much as that of school heads. Nevertheless, Island regions had about one quarter of the teachers in the "Medium Risk" group and Southern has over 15 percent of teachers in the "High/Very High Risk" group.

These results raise more questions than they actually answer. Most teachers and school heads had a high level of knowledge about HIV-AIDS and yet a small group of them gave themselves a high rating of becoming infected with HIV – which suggests that they may be involved in high risk behavior. This misfit between level of knowledge about HIV–AIDS and behavioral self-risk assessment of being infected with the virus has implications for general prevention initiatives. Roth, Ngugi and Fugita (2003) in their study of self-deception pointed out that there was a resistance to changing high risk behavior in Sub-Saharan Africa in spite of survey data indicating high level of knowledge. On the other hand, Kelly (2000) claimed that the little available evidence which existed linking change of behavior with knowledge about HIV- AIDS seem to point to the possibility that education was beginning to realize its potential in protecting against HIV infection.

8.4 Relationship between pupil knowledge level and pupil attitudes to HIV- AIDS

The relationship between knowledge and attitudes has relevance for health awareness programmes and community health issues. Therefore, it may be useful to examine the

relationships between pupil levels of knowledge and their attitudes to HIV-AIDS. Pupils were divided into two categories: those who had achieved the "Minimum Level of Knowledge" and those who had not. This variable was cross tabulated with responses of pupil regarding their behavior to a friend infected with HIV (Table 8.8), their caring for a relative ill with AIDS (Table 8.9), their feelings about allowing a pupil infected with HIV to attend school (Table 8.10).

Table 8.8: Percentage of pupils indicating behavior towards a friend infected with HIV

	Be more friendly		Same as before		Avoid him/her		Not sure	
	%	SE	%	SE	%	SE	%	SE
Not reached minimum level	13.1	1.0	15.1	1.1	16.1	1.1	55.7	1.5
Reached minimum level	20.7	2.1	21.8	2.1	7.4	1.4	50.1	2.6

It can be seen in Table 8.8 that if the second and third columns two are combined to indicate the percentage of pupils with a positive attitude there were over 42 percent of pupils who had reached the minimum level of knowledge and indicated a positive attitude. This can be compared to about 28 percent of the pupils who had not reached the minimum knowledge level. It can be noted that at the level of uncertainty there was about half of the pupils from both groups. However, there was twice the number of pupils who would avoid or shun a friend infected with HIV from the group without the minimum level of knowledge. These results are encouraging since they can be interpreted to show that at least having a certain level of knowledge about HIV-AIDS can have a positive influence on reducing discriminatory behavior.

Table 8.9: Percentage of pupils willing to take care of a relative ill with AIDS

	No		Yes		Not sure	
	%	SE	%	SE	%	SE
Not reached minimum level	18.9	1.1	41.8	1.4	39.3	1.4
Reached minimum level	8.1	.9	54.9	2.6	37.1	2.5

In Table 8.9 the percentage of pupils who were not sure about caring for a relative with AIDS (column 3) was not very different in the two groups (about 38 %). There was a slightly higher percentage of pupils (55% compared to 42%) who acknowledged that they would take care of a sick relative. On the other hand the number of pupils who had not reached the minimum knowledge level and said that they would not take care of the relative was more than doubled those who had reached the minimum knowledge level. Again the useful message from those results is that having more knowledge can make a difference in ones caring attitude towards a relative with AIDS.

In Table 8.10 the percentages of pupils who were not sure about whether a pupil infected with HIV-AIDS should be allowed to attend school were the same for each category of pupils (about 28%). However, there was about twice (52%) the number of pupils who were sure about allowing pupils with HIV to continue in the minimum knowledge category. Surprisingly, the number of pupils who responded with an outright no in the group with minimum knowledge was more than doubled that in the knowledge category.

Table 8.10: Percentage of pupils indicating allowing infected pupil to attend school

	No		Yes		Not sure	
	%	SE	%	SE	%	SE
Not reached minimum level	45.2	1.4	26.6	1.3	28.2	1.3
Reached minimum level	20.0	2.1	51.6	2.5	28.5	2.3

A fairly consistent pattern emerges from the three tables in which it can be detected that there were more pupils who had reached the minimum level of knowledge with positive attitudes about persons with HIV–AIDS. The association between knowledge and attitude is particularly strong and differentiates between the two groups of pupils in their responses to avoidance of a friend infected with HIV, caring for a relative with AIDS and tolerance of an HIV infected pupil in school. These results confirmed many studies including the one in Seychelles (Ministry of Health, 2009) that knowledge is a major prevention tool for the fight against the epidemic. The findings from this study are encouraging in that there is a relationship between knowledge about and attitude towards HIV-AIDS - although there still remains a considerable degree of negativity.

Policy suggestion 8.5: The Ministry of Education should start teaching aspects of HIV-AIDS much earlier in the primary school so as to increase the knowledge levels that would promote positive attitudes towards persons infected with HIV-AIDS.

8.5 Information about HIV and AIDS

Since no cure for HIV-AIDS has yet been discovered, knowledge about HIV-AIDS prevention has become one of the main weapons to fight the epidemic. This has resulted in greater interest in prevention education programme that offer young people a greater understanding of: transmission mechanism, mythical ideas surrounding the disease, risky behavior which may lead to infection, and the need to develop a caring and supportive attitude to those who have been infected and perhaps living with AIDS. Teachers, health workers and other caring persons therefore need to know more about when young people consider to be the best and most trusted sources of information about HIV and AIDS.

In SACMEQ III Project pupils were presented with various sources of information on HIV-AIDS and they were asked had to respond with a “Yes” or “No” as to whether they used each source listed in column 1 of Table 8.11. The percentages of pupils acknowledging the sources from which they received information about HIV-AIDS are contained in the second column of the table. The percentage value has been ranked from the highest to the lowest to facilitate analysis.

From Table 8.11 three groups of responses can be identified: responses relating to “Major Source of Information”, those referring to “Specialized Source of Information” and those regarding “Individualized Source of Information”. These categories have been formed from a judgment about the high, medium or low percentage of pupils responding “Yes” to the sources of information.

Table 8.11: Percentage of pupils receiving information about HIV-AIDS from various sources

	Yes	
	%	SE
Pupil has received AIDS/HIV information from TV	98.1	0.4
Pupil has received AIDS/HIV information from-Radio	93.5	0.6
Pupil has received AIDS/HIV information from-Classroom Lesson	92.2	0.6
Pupil has received AIDS/HIV information from-Hospital/Clinic	89.5	.0.8
Pupil has received AIDS/HIV information from-Teachers	86.5	0.8
Pupil has received AIDS/HIV information from-Poster/Billboard	85.2	0.9
Pupil has received AIDS/HIV information from-Magazines/Newspapers	82.8	1.0
Pupil has received AIDS/HIV information from-Books	76.6	1.1
Pupil has received AIDS/HIV information from-Relatives	71.1	1.1
Pupil has received AIDS/HIV information from-Doctor	69.3	1.1
Pupil has received AIDS/HIV information from-Friends	60.7	1.2
Pupil has received AIDS/HIV information from-Community Hlth Worker	59.7	1.2
Pupil has received AIDS/HIV information from-Counselors	59.4	1.2
Pupil has received AIDS/HIV information from-School Club	58.6	1.1
Pupil has received AIDS/HIV information from-Drama/Play	56.4	1.2
Pupil has received AIDS/HIV information from-Recreation Actvts	45.7	1.1
Pupil has received AIDS/HIV information from-Computer	36.0	1.2
Pupil has received AIDS/HIV information from-Internet	32.8	1.2
Pupil has received AIDS/HIV information from-Person HIV+	28.0	1.1
Pupil has received AIDS/HIV information from-Cinema	28.0	1.1
Pupil has received AIDS/HIV information from-Religious Person	27.3	1.1
Pupil has received AIDS/HIV information from-Peer Educator	23.1	1.0
Pupil has received AIDS/HIV information from-Video	16.2	0.9

In the first category of sources of information pupils were responding to common sources of information and over 76 percent of pupils received information about HIV-AIDS from these sources. These included TV, radio, schools, hospital and printed materials. This result highlights the importance of schools and health establishments. For school as a source of information, the majority of pupils (92%) admitted that they received information from "Classroom lesson" and a substantial majority of pupils (87%) admitted to receiving information from 'Teachers'. TV has been ranked as the first source of information (98%) of pupils endorsed TV as a source of information. This can easily be understood as TV is widely watched and apart from news items, in which HIV-AIDS reports are made there are health-related programmes which have been used to pass on information about HIV-AIDS. On the other hand radio is perhaps very popular with young people and apart from occasional programme on health related issues, there are repeated cautionary advice about HIV and sexual behavior, and the use of condoms has been stressed. It is also clear that a substantial number of pupils receive information from general print-related sources; 85 percent of pupil from posters and bill boards, 82 percent from magazines and newspapers and 76 percent from books.

Sources of information in the second group are more individualized. Pupils receive information about HIV-AIDS from significant others such as friends and relatives and specialists such as health workers, doctors, community workers and counselors. It is worth noting that 71 percent of pupils received information about HIV-AIDS from relatives compared to about 59 percent from counselors and community workers. One can assume that students only have occasional contacts with health professionals in which information about HIV AIDS is provided.

The third group of responses seemed to include more personal sources which would depend on interest and availability. These are less common sources for pupils to receive information about HIV-AIDS. Only around half of the pupils receive information from School Clubs, Dramas, and Plays, and other recreational activities. About one-third of pupils receive information from computers and internet. Video which is ranked last is seen as a source of information for on 16 percent of pupils.

These findings may have implications for teaching. For example, teachers may need to exploit the major sources. They may need to find out how they actually bring the radio and all printed information into the classroom as resources. For the more personalized sources perhaps teachers need to make students aware of where they can get the information, of reliable sources of information, and they need to explain the various means of communication available. Personal sources should also be exploited as teachers try to meet the diverse needs of students and employ a wide variety of teaching learning strategies. Promotion of peer education could be one of the strategies.

Policy suggestion 8.6: The Ministry of Education should ask the Centre for Curriculum Assessment and Teacher Support to work with the School of Education at the University of Seychelles to develop more effective HIV-AIDS instructional programmes by using all available sources, and train teachers to adopt varied teaching learning strategies to deliver the programme.

8.6 Classes on HIV-AIDS

The delivery of HIV-AIDS curricula in school systems is varied. For many school systems the subject is part of health-related or social science subjects. In order to get an idea of curriculum exposure pupils were asked whether they had attended classes/lessons on HIV-AIDS during the school year in their respective schools, and they had to give a "Yes" or "No" answer.

In Table 8.12, the percentage of pupils who responded positively to attending HIV-AIDS classes has been presented by regions. In Primary 6 classes in Seychelles, as a whole, just over three quarters of the pupils (78%) acknowledged that they attended HIV-AIDS classes during the school year in which the data was collected. Very high values were registered for Eastern, Island and Northern (above 93 %). It can be assumed that the majority of pupils in those regions had classroom lessons on HIV-AIDS. However about 40 percent of pupils in three regions admitted to not attending HIV-AIDS classes. This is quite serious.

In the primary school system of Seychelles the HIV-AIDS curriculum is delivered as a component of the Personal and Social Education Programme (PSE). This programme is loaded with various aspects of social life, life skills, health-related issues and to some extent citizenship education. PSE is a compulsory subject in the primary school although aspects of HIV-AIDS are taught in Primary 5 and 6 and are linked with reproductive health, sexual behavior and child development. Since the subject is non-examinable, there

has been a tendency in some schools for it to be neglected because of timetabling and sometimes human resource constraints. This is probably the reason why not all pupils (100%) percent were attending HIV-AIDS classes. Since as it was found above that "Classroom Lesson" was one of the major sources of information for pupils, the Ministry of Education needs to find out how what provisions are made to teach PSE in primary schools.

Table 8.12: Percentage of pupils attending HIV - AIDS classes

Regions	Yes	
	%	SE
Central	68.8	2.0
Eastern	93.5	1.5
Islands	99.0	0.7
Northern	99.0	0.7
Southern	57.3	2.7
Western	59.4	2.6
Seychelles	**78.1**	**0.9**

Policy suggestion 8.7: The Ministry of Education should monitor the teaching of PSE and HIV-AIDS particularly in the Western Southern and Western regions.

8.7 Conclusion

The most unexpected finding in this chapter was the mismatch between pupil knowledge and teacher knowledge about HIV and AIDS. Whilst almost all teachers had reached the desirable level of knowledge according to the HAKT, more than three quarters of the pupils had not even reached the minimum knowledge level. There were also significant demographic differences in terms of gender, socio-economic status, and location. It was noted that some aspects of HIV-AIDS enter the curriculum only at Primary 5 and Primary 6 level and it was suggested that the Ministry would need to take action to review HIV-AIDS prevention education programmes in primary schools.

Additional data on attitudes to HIV-AIDS were analysed to gain a better understanding of the impact of awareness programmes to promote caring attitudes to persons living with HIV and AIDS. It was found that although only a small percentage of pupils demonstrated outright discriminatory and prejudicial attitudes from their responses, there were almost half of them who expressed uncertainty. Encouragingly, it was found that there was a positive association between pupil knowledge and pupil attitudes. This would reinforce the need to carry out a curriculum overhaul to increase the knowledge level of pupils about HIV-AIDS.

Finally, by studying classroom attendance of HIV-AIDS lessons and sources of information, it was possible to highlight some of the problems with the teaching of the HIV-AIDS curriculum and the timetabling of Personal and Social Education within which components of HIV-AIDS are taught. Since pupils reported that one of the most important sources of information was through attending classes on HIV-AIDS, the need to re-examine curriculum delivery of HIV and AIDS becomes ever so important.

All children need to have the basic knowledge about HIV-AIDS that is required to protect and promote health. The Ministry of Education should therefore take immediate action to address the research-based policy suggestions presented above, and to carefully monitor the design, and implementation of new (and more effective) HIV-AIDS prevention education programmes.

Chapter 9
Conclusion and Agenda for Action

9.1 Introduction

This report is the second study of primary education in Seychelles. It comes at a time when many countries are concerned with progress made towards the Education for All (EFA) agenda and the Millenium Development Goals (MDG) in the provision of basic education. Moreover, in the SACMEQ III Project a sub-study of issues related to HIV-AIDS have been undertaken. The decision to monitor the quality of the primary education system coincided with the recent reforms in the education system of Seychelles. A major thrust of the reform is to strengthen the provision of basic education to meet the diverse needs of pupils

The analyses in the preceding chapters have been based on data emanating from a national survey of primary schools in Seychelles. The analyses yielded detailed information on knowledge levels, and the conditions and functioning of primary schools. By relating the results to the local context, it has been possible to highlight the successes of the system and to identify areas in need of improvement or further development.

The research findings have shown that the Ministry of Education have maintained commendable level in providing infrastructural and physical facilities. It has maintained a remarkable level of pupil access to primary education for both genders and has achieved universal primary education. It has maintained a large teaching force in the primary schools and has strengthened school leadership. There has been marked improvement in classroom activities such as homework, and the system is not plague by controversial issues such as private tuition. However, a comprehensive review of the provision of teaching and learning materials needs to be carried out. The level of access of textbooks and teacher guides do not match the level of access to physical resources.

In the study, many of the reform initiatives has been commented on so that the Ministry of Education could use information from the research to facilitate the implementation of the reform and set up evaluation structures. One major concern of the Ministry of Education has been to improve the link between home and school. It has been noted that some progress have been made and that the Ministry of Education should actively engage members of the School Council to strengthen community involvement, to devise strategies to solicit more parental and community support. The school head as a senior member of the school council should play a key role and the Ministry of Education in making the school heads more autonomous and accountable should review the professional profile of school leaders.

Curriculum matters particularly related to literacy, numeracy, and health (in relation to knowledge about HIV-AIDS) have been highlighted. Seychelles was amongst the top scoring countries in literacy and numeracy. However, it has been shown that there were a disproportionate number of pupils who were not at the expected levels. Therefore the reform priority to strengthen early childhood education to increase the level of numeracy and literacy and to set up a early diagnostic system and remediation gains further support from the SACMEQ analysis. Furthermore, although the project designed to improve pupil achievement in mathematics did not provide the expected results, at least, it the information from the SACMEQ study should provide further impetus to evaluate the project and to build on what has been achieved, and revise intervention to target classroom processes. On the other hand the knowledge level on HIV-AIDS of pupils in Seychelles was amongst the lowest in the SACMEQ countries and the Ministry of Education would need to engage into major curriculum development work and teacher training activities concerning HIV-AIDS.

The study has also brought to light some of the problems with the professional development of teachers. Teacher quality in terms of academic level, training, and support seem to be a major stumbling block in the development of quality primary education. The remit of the University of Seychelles and the Centre for Curriculum, Assessment and Teacher Support has become very so important in improving the quality of education in Seychelles. The Ministry of Education should ensure that teacher training and development is linked with initiatives to improve the professional conditions of teachers such as reviewing appraisal system, reviewing the scheme of service and setting up a Teachers Council.

As it can be viewed so far, the general picture of primary schools depicted by the results proved to be rather mixed. There were definitely areas of improvement, there were also areas where the high provision level has been maintained. However, there are signs of deterioration in some important areas, and other critical issues need further attention. One area which probably clouds some of the improvement which has been made was the high incidence of behaviour problems. It is hoped that the effect of the new pastoral care system will be monitored and that it will help to reduce some of those behaviours problems. These issues will need attention in order to maintain what has been achieved and improve the quality of primary education in Seychelles. In Chapters 3 to 8 a range of policy suggestions were made in order to generate discussion and stimulate action.

9.2 Classification of Policy Suggestions

A total of 42 policy suggestions emerged from the analyses. In order to facilitate discussion concerning these suggestions, and to assist decision-makers in devising a plan of action that can result in coherent strategies from the various divisions, sections and units of the Ministry of Education, the policy suggestions were grouped under five main categories. These were: the establishment of consultative arrangements with staff, community members and experts; reviews of existing planning and policy procedures; further small-scale data collections for planning purposes; the initiation of large-scale

educational research studies; and, investment in infrastructure and resources. This classification was based on the operational implications that these suggestions have for the Ministry of Education.

1. Consultation with staff, community and experts: This group contained eight suggestions (3.5, *4.6, 5.4, 5.6, 5.7, 6.6, 7.4, 8.2,)* about various consultative arrangements which the Ministry of Education will need to make with different stakeholders in education. They involved meetings and discussions that would promote an open and on-going dialogue aimed at generating strategies for productive action. This could be achieved by arranging initial meetings, forming special discussion groups, or using existing fora, and setting up action groups

2. Consolidating, reviewing, developing plans and policies: Fifteen (3.3, 3.4, 4.1, 4.3, 4.5, 4.7, 4.8, 4.9, 5.1, 5.3, 7.2, 8.5,**)** policy suggestions were grouped together under this heading. They concerned both specific policy reviews and general policy development. The policy concerns that were related to, homework, assessment, role of head teachers, and school activities could be dealt with at system level, whereas the staffing policy, pastoral care, community involvement may need both a system-level and a national-level approach.

3. Data collection for planning purposes: A total of seven (3.1, 3.6, 4.4, 5.2, 5.8, 6.2, 7.5) suggestions were contained within this group. They were intended to point out gaps that exist in the system where more specific information is needed. They involved fairly small-scale investigations that would extend the knowledge of the Ministry of Education on issues such as, the provision of extra tuition, training needs, staff deployment, and the characteristics of certain groups of learners.

4. Educational research: Five (6.5 7.1, 8.3, 8.4, 8.7) major investigations were suggested in this group. Projects relating to evaluation studies, curriculum research, and monitoring reviews will be set up and implemented by the Ministry of Education. These were large-scale research projects that would assess the effectiveness of various aspects of the system, and provide decision-makers with substantial information on its functioning.

5. Investment in resources: In this group nine (3.2, 4.2, 4.3, 4.10, 6.1, 6.4, 5.8, 5.9, 7.3, 8.6**)** policy suggestions were collected that required the Ministry to provide funds for training, developmental projects, upgrading facilities, and procurement of resources. Although in-service courses may not require a heavy investment, courses for teachers probably would. In some cases there may be a need to re-allocate resources but in other circumstances a major programme for the repair of buildings and the provision of teaching learning resources will need to be established.

Table 8.1: Summary of Policy Suggestions

Policy Suggestions	Relevant Departments	Time	Cost
Group 1: Consultation with staff, community and experts			
Policy suggestion 3.5 The Ministry of Education should continue with its effort to get more parents involved with the education of their children and "home support and parental involvement" should be an important item on the agenda of the School Council of each school.	Schools Division	Short	Low
Policy suggestion 4.6 The Centre for Curriculum, Assessment and Teacher Support (CCATS) should collaborate with the Schools Division at the Ministry of Education and engage in policy discussion about the co-ordination of in-service courses and in line with the national curriculum activities to ensure that there are in-service training opportunities across regions and curricular areas.	CCATS Schools Division	Medium	Low
Policy suggestions 5.4 The Ministry of Education should have a discussion with the chairpersons of the School councils on the development of strategies to increase community participation in their particular school.	Schools Division	Medium	Low
Policy suggestions 5.6 The Schools Division in collaboration with the Student Welfare Section should meet with school heads and the chair persons of the School Councils to discuss the findings that suggest an elevated level of behavioural problem among pupils. This meeting should be asked to prepare a plan to monitor the implementation of the new pastoral care system and its effect on the reduction of behavioural problems in schools.	Student Welfare Section	Short	Low
Policy Suggestion 5.7 The Schools Division should schedule an extraordinary meeting with primary school heads about teacher behavior problems and the problems with teachers arriving late, being absent, and not being covered when absent for illness and the emerging problem of teachers bullying pupils should be included on the agenda.	Schools Division	Short	Low
Policy suggestion 6.6 The Ministry of Education should sponsor a public debate on gender equity issues related to the functioning of primary schools in Seychelles – with particular attention being given to staffing, streaming, and pupil achievement levels	Office of Principal Secretary	Short	Low

Policy Suggestions	Relevant Departments	Time	Cost
Policy suggestion 7.4 The Ministry of education should re-consider previous initiatives of setting up a Gender Action Team (GAT) to discuss these results and devise action research strategies to address the issue of gender gap in achievement in primary schools	Schools Division	Short	Low
Policy suggestions 8.2 The Centre for Curriculum Assessment and Teacher Support should organize a series of discussion meetings for school heads and teachers in order to make them more aware of the research results arising from the SACMEQ III Project, and to explore solutions to the issue of the large gap between teacher and pupil knowledge about HIV-AIDS.	CCATS	Short	Low

Policy Suggestions	Relevant Departments	Time	Cost
Group 2: Consolidating, reviewing, developing plans and policies			
Policy suggestion 3.3 The Ministry of Education needs to consolidate the implementation of the new Pastoral Care system and monitor its impact on the reduction of behavior problems - particularly, absenteeism in the primary school.	Schools Division Student Welfare Section	Medium	Low
Policy suggestion 3.4 The Ministry of Education should review school policies on homework and ensure that emphasis is placed on teachers explaining pupils' answers in class.	Schools Division	Short	Low
Policy suggestion 4.1 The Ministry of Education should have discussion with the newly-established University of Seychelles to devise strategies to recruit young teachers.	Office Principal Secretary	Short	Low
Policy suggestions 4.5 The Ministry of Education should review its school staffing policy that will take into consideration qualifications, training, age, and gender (where possible) to ensure equitable distribution of teachers in school	Schools Division	Medium	Low
Policy suggestion 4.7 CCATS should provide guidelines about assessment and testing at school level and should provide teachers with the support to develop and use appropriate tests. They should also monitor assessment practices in the school to ensure that pupils are tested regularly in all subject areas.	CCATS	Short	Low

Policy Suggestions	Relevant Departments	Time	Cost
Policy suggestion 4.7 CCATS should provide guidelines about assessment and testing at school level and should provide teachers with the support to develop and use appropriate tests. They should also monitor assessment practices in the school to ensure that pupils are tested regularly in all subject areas.	CCATS	Short	Low
Policy suggestion 4.8 The Ministry of Education should strengthen school policy on parental involvement through the recently established School Council.	Schools Division	Short	Low
Policy suggestion 4.9 The Ministry of education should ensure that school policy on homework includes the necessity for parents to sign homework assignments.	Schools Division	Medium	Low
Policy suggestion 5.1 The Ministry of Education should take into consideration the results regarding the professional characteristics of school heads and review the regulations and procedures for the recruitment, selection and deployment of school heads.	Schools Division	Medium	Medium
Policy suggestion 5.3 Within the Education Reform Plan, the Ministry of Education should review the job description of schools heads and reinforce minimum teaching time.	Schools Division	Short	Low
Policy suggestion 7.2 The Ministry of Education should reinforce its plan to ensure that all primary school teachers without a qualification in mathematics should follow in-service IGCSE core mathematics curriculum in order to improve their knowledge level.	Schools Division	Medium	Medium
Policy suggestion 8.5 The Ministry of Education should start teaching aspects of HIV-AIDS much earlier in the primary school so as to increase the knowledge levels that would promote positive attitudes towards persons infected with HIV-AIDS	CCATS	Medium	Low

Policy Suggestions	Relevant Departments	Time	Cost
Group 3: Data collection for planning purposes			
Policy suggestion 3.1 As part of the national campaign to sensitise children and parents about proper nutrition, the Ministry of Education should collaborate with the Ministry of Health to identify pupils in schools who may not be eating regular and balanced diets and initiate special nutritional sessions with the parents concerned.	Schools Division Student Welfare Unit	Short	Short
Policy suggestion 3.6 Further information may need to be analysed to identify the nature, and extent of the practice, and the role of teachers involved in giving extra tuition so that it does not become a major problem as it can be in other countries.	Schools Division	Short	Low
Policy suggestion 4.4 The Schools Division of the Ministry of Education should use the SACMEQ data to ensure equitable allocation of staff in the different regions and should anticipate the entry of newly-qualified graduates in primary schools and prepare a staffing plan for the equitable deployment of those teachers. Ministry of Education needs to identify appropriate courses to up-grade the academic education of Primary head teachers.	Schools Division	Long	Low
Policy suggestion 5.2 The Ministry of Education should collaborate with the University of Seychelles to identify appropriate courses to continue to upgrade the level of school heads in primary schools and plan management training courses.	Schools Division	Medium	Medium
Policy Suggestions 5.8 The Ministry of Education should conduct a survey on the use of school library in each individual school and work with school heads to develop school library information and procedures for all pupils to be allowed to borrow books from the school library.	Schools Division CCATS	Short	Low
Policy Suggestions 6.2 The Ministry of Education should establish why there was a major decline in the provision of pupil reading and mathematics textbooks in Island region between 2000 and 2007, and then take action to remedy this situation.	CCATS	Medium	High

Policy Suggestions	Relevant Departments	Time	Cost
Policy Suggestions 7.5 The Student Welfare Section at the Ministry of education should use the SACMEQ data to identify pupils in the low SES group who are underachieving and with the support of other agents such as social and health workers identify social or learning problems with a view to develop individualised plans to improve learning conditions.	Student Welfare Section	Medium	Low

Policy Suggestions	Relevant Departments	Time	Cost
Group 4: Educational Research ***Policy suggestion 6.5*** The Ministry of Education should establish a specialist committee to undertake a comprehensive review of the delivery of mathematics teaching at the upper primary school level (training, textbooks, and teacher guides) so as to ensure that plans are made to improve teaching and learning materials and the knowledge base of primary 6 teachers	CCATS	Long	High
Policy suggestion 7.1 The Ministry of Education should reconvene the Mathematics Working Group to evaluate the IPAM Project with particular focus on achievement levels and the quality of mathematics lessons.	Principal Secretary Office	Medium	Medium
Policy suggestion 8.3 The Ministry of Education should find out why there is such large gap in knowledge levels about HIV-AIDS for pupils from wealthy and poor home backgrounds who are located in islands, Western, and central regions.	Schools Division	Short	Low
Policy suggestion 8.4 The Centre for Curriculum Assessment and Teacher Support should take a leading role in monitoring those gender differences overtime and link with teacher trainers at the University of Seychelles to make possible adjustments to HIV-AIDS programme to ensure more equitable knowledge outcomes.	CCATS	Long	Medium
Policy suggestion 8.7 The Ministry of Education should monitor the teaching of PSE and HIV-AIDS particularly in the Western region	CCAT Schools Division	Medium	Low

Policy Suggestions	Relevant Departments	Time	Cost
Group 5: Investment in resources *Policy suggestion 3.2* The Ministry of Education should develop contact with the National Library to develop projects to increase the number of books in the library and have regular sessions with pupils to encourage them to borrow books from the national Library.	CCATS	Long	Medium
Policy suggestion 4.2 The Ministry of Education in collaboration with the University of Seychelles should increase their efforts to recruit male students to train as teachers.	Schools Division	Long	High
Policy suggestion 4.3 The Ministry of Education in collaboration with the University of Seychelles should review strategies to recruit and train young people to degree level to teach in the primary school.	CCATS	Long	High
Policy suggestion 4.10 The Ministry of Education should seek funding to develop professional resource centres for teachers in each region.	Principal Secretary	Long	High
Policy suggestion 6.1 The Ministry of Education should take immediate action to provide financial support that will ensure improvement in the availability of reading and mathematics textbooks	Principal Secretary CCATS	Short	High
Policy suggestion 6.4 The Ministry of Education needs to strengthen its in-service training programmes so that all school heads keep abreast of modern management methods, and all school staff have sufficient knowledge to be able to contribute to the effectiveness of HIV-AIDS prevention education programmes.	CCATS	Long	Medium
Policy suggestion 8.6 The Ministry of education should ask the Centre for Curriculum, Assessment and Teacher Support to work with the School of Education at the University of Seychelles to develop more effective HIV-AIDS instructional programmes by using all available sources and train teachers to adopt varied learning strategies to deliver the programme.	CCATS	Medium	Medium

9.3 Agenda for Action

The economic conditions of Seychelles and the constraints of a micro state in terms of human and material resources would make it unrealistic for the Ministry of Education to address all of the above policy issues at one time. It would not be possible for the Government of Seychelles to fund all of these projects or to have the human resource capacity to manage them.

It must be evident from the research findings that Seychelles has established a functional primary education system and that many of the suggested projects are intended to integrate within the reform plans of the Ministry of Education, to illuminate reform implementation in the primary schools with perhaps one or two areas hat would need more radical change. Therefore, the presentation of an agenda for action takes into consideration time and cost as was indicated in the third and fourth columns of Table 8.1. It must be remembered that these are rough estimates and that both educators and decision-makers need to participate in discussing and reviewing the plan.

The time estimates were designated as "short", "medium" and "long" whereas, the cost estimates were designated as "high", "medium" and "low. The short timeframe was estimated as being around three to nine months, medium as being from one to two years, and long as being around three to five years. In a similar way, low cost was estimated for initiatives that could be accommodated within the recurrent budget, medium for those initiatives that could build on existing budgets in association with additional funds, and high cost for major projects that could be planned as capital projects by the Ministry of Education, and would probably need to be budgeted with some external assistance.

Taking the cost factor into consideration, the Ministry of Education could adopt a four-stage approach as an agenda for action. In the first stage the Ministry could activate proposals that do not need extra funding. These could be started immediately. Once action in this stage is well under way, the second stage could be commenced. The third stage would require the gathering of substantial information to plan for further action. The final stage would require long-term planning and major capital investment and negotiation with funding agencies.

Stage 1: The timeframe and cost patterns discussed above showed that the Ministry's first actions in response to the list of suggestions given in Table 8.1 should be concentrated on those that were listed under Group 1. All of these suggestions require debate and consultation that would allow dialogue and negotiations. Moreover, structures, in particular, the School Councils are well in place and they should be used to organise the discussion and facilitate community and national involvement.

Stage 2: The suggestions in Group 2 should be the main focus of the Ministry of Education action. These involve reviews and developing policies and procedures that would follow-on fairly consistently from the first stage. However, the most important proposals concerning staffing are more long term and may need some extra funds for the training and monitoring of teachers.

Stage 3: At this stage it is recommended that the Ministry of Education concentrate on data collection exercises in Group 3. Perhaps, it should begin with 3.1, 3.6 and 5.8 where the timeframe is short and the cost is low. However, it is proposed that the Ministry

prioritises the other suggestions and prepare project proposals to discuss with outside agencies for appropriate funding.

Stage 4: All of those projects would require except for 8.3 have medium to long term timeframe. It may be possible to begin by implementing suggestion 8.3 where cost is low. However, suggestions 8.3, 8.4 and 8.7 are concerned with issues of HIV-AIDS and perhaps they can be planned as one project. The same applies to suggestions 6.5 and 7.1 relating to mathematics. Perhaps two major projects can be written-up and advice and resource inputs from outside agencies can be sought.

Stage 5: These suggestions contain two important resource areas: material resources and the development of human resources. It may be necessary for the Ministry of Education to re-consider its position or procedures for the allocation and development of teaching learning resources. On the other hand, a strong injection of capital may be necessary to procure material resources. However, teacher training, requires more long term investment. The Ministry of Education should bring these suggestions in line with its Education Reform Plan and long-term strategic plan.

9.4 Concluding Remarks

This report was prepared as the Seychelles' component of the third cross-national educational policy research project undertaken by the 15 Ministries of Education that form the Southern African Consortium for Monitoring Educational Quality (SACMEQ). This project, known as the SACMEQ III Project, was designed and implemented as a collaborative venture undertaken by national teams of educators and researchers, and with the technical support of staff from the International Institute for Educational Planning (IIEP).

The production of the report evolved through a series of capacity-building training activities that included intense training workshops conducted by the IIEP. The outstanding success of SACMEQ III Project illustrates the effectiveness of SACMEQ's unique co-operative "working style" whereby expertise and knowledge are exchanged, and concerns and experiences are shared at an international level.

The well-developed data archive for SACMEQ II have enabled comparison to made between SACMEQ II and SACMEQ III to provide a better understanding of the changes within the educational system of Seychelles. The authors of this report hope that the report will reinforce and extend the reform plan of the Ministry of Education and provide the impetus for Seychelles to undertake a national debate concerning the issues that were raised as "Agenda for Action" in the final chapter of this report.
Moreover, a variety of Policy Briefs on the quality of Education in SACMEQ countries have also been written to provide additional and supplementary information to broaden understanding of primary education systems, and to enhance the quality of decision-making and developmental planning in the Ministries of Education.

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