--

REVIEW OF MONTSERRAT'S PRIMARY AND SECONDARY SCHOOLS' ORGANISATION AND INSTRUCTIONAL PRACTICES IN CURRICULUM DELIVERY

Joan Spencer-Ernandez, MA

Deon Edwards-Kerr, PhD

ACKNOWLEDGEMENTS

We would like to express our gratitude to the students, teachers and principals in Montserrat who allowed us to conduct this review in their classrooms and schools. We are grateful to the parents who attended the group interviews and provided invaluable insight into the arrangements of schools, their children's learning, and the effectiveness of current policies and practices. Of course, this review would not have been possible without the Ministry of Education - the Permanent Secretary, the Director of Education, the Education Officers and the Administrative Staff.

Thank you

Joan and Deon

Contents

CHAPTER 1: INTRODUCTION

Purpose of the Review

This report presents the findings of the review of the current status of pedagogical practices in primary and secondary school classrooms throughout Montserrat's education system. The review was commissioned by the Ministry of Education as part of the Government of Montserrat's Teacher Enhancement Project. The aims were to identify critical factors at play in the success/failure of schools; propose appropriate interventions to improve pedagogical practices, and, strengthen the capacity of teachers and educational officers to enable improvement in the attainment of *all* students.

Specifically, the review focused on implementation of curriculum strategies in classrooms with special emphasis on classroom organization and instructional practices. The findings will inform:

i) the development of a model for on-going professional development of teachers in effective pedagogical practices;
ii) the development of training handbooks on differentiated instruction, classroom management and assessment procedures and practices;
iii) the recommendation of instructional materials for teachers; and,
iv) capacity building strategies for Education Officers.

The report has two aims. The first is to provide description of classroom atmosphere, instructional strategies, the nature and use of material resources, teacher-student interaction, classroom management and student behaviour. These descriptions are based on the Consultants' observations of lessons, as well as, teachers' and students' perceptions of teaching and learning. And, in some cases might be dissimilar from the view that persons close to classrooms in the respective schools might have. Nonetheless, we believe that the systematic

approach to observations combined with the views of students is a good basis for making judgments about pedagogical practices. At the same time, it is likely that some stakeholders will not be surprised by our observations.

The second aim is to present an analysis of inter-connections between the various facets of the teaching and learning process, and, how these invariably affect students' academic and behavioural performance. This analysis will be undergirded by the results of the teacher and student surveys, as well as, statistical analysis of student performance over a two year period in National Standards Tests at Grades 3 and 5 in the primary schools, as well as, CSEC data in four subjects for 6 years. Although evidenced-based this aspect of the report will be largely interpretative and will form the basis for recommendations to the Ministry of Education regarding appropriate implementation of curriculum strategies in classroom to enhance student performance.

Drawing on the terms of reference, the Review was based on the following objectives:

1. identification of the key factors at play in the success of school to adequately provide for the learning needs of all students, and thereby produce satisfactory performance in national standardized assessment;

2. Describe the range of instructional strategies employed by teachers in primary and secondary classrooms;

3. Evaluate the appropriateness of these strategies (in 2 above) for reaching all students;

4. Analyse student performance in national and regional standardized tests in light of the approaches employed by teachers;

5. Evaluate the extent of teachers' preparedness to effectively implement appropriate instructional strategies, manage classrooms, and construct valid and reliable classroom assessment;

6. Examine the current framework of schools to manage the monitoring and evaluation of instructional and assessment strategies;

7. Develop recommendations for the capacity building of teachers, and education officers, and, strengthen the institutional arrangements in school to maintain effective teaching.

These objectives provide the basis for the collection of data in schools and informed the development of the classroom observation checklist, the teacher and student survey instruments, informal conversations with Education Officers, group interviews with parents, and, analysis of student performance data.

Throughout the review we observed a range of contexts in which teaching and learning takes place in classrooms in primary schools and the Montserrat Secondary School. The report therefore sets out to describe these contexts and strategies, and discuss the underlying factors that may restrict or facilitate teachers' use of differentiated approaches and authentic assessment, and appropriately manage student behaviour, especially among students in the lower streams. In order to highlight the contexts in which teaching strategies are delivered, we have placed at the centre of the discussion – the way teachers work with students, the classroom atmosphere, student-teacher interaction, the nature and use of resources used in the classrooms, student behaviour and approaches to managing student behaviour. Through this we hope to provide some insight into the dynamism at play in classrooms and the factors which impact on effective teaching and learning.

In chapter two we will examine teachers' view of instructional policy and practices and the adequacy of their training to effectively implement appropriate teaching

strategies to include all students. This is based on the findings of the teachers' survey and the classroom observation checklist.

Chapter three will examine the delivery of instructional policies and strategies from the point of view of students, including their view of the effectiveness of these strategies in enabling their learning. Through the survey students were also given the opportunity to rate the extent to which teachers are able to effectively manage the classroom atmosphere and provide a context in which they feel able to learn. This analysis will be augmented by our observation of classrooms and the interaction between teachers and students.

In chapter four we make connections between student performance over that past two years (primary) and six years (secondary), and, the instructional policy and practices observed in school, teacher quality and assessment procedures and practices.

Chapter five entails the recommendations for the design of the professional development training model for teachers including the essential principles that will undergird the model; the outline of the handbooks to be produced as instructional materials for teachers; suggestions for strengthening the capacity of Education Officers to provide direction and oversight to schools in the areas of instructional strategies, classroom management and assessment.

Methodology and Data Collection

The scope of the review was to provide a broad picture of the range of pedagogical practices employed in Montserrat School System. This is line with the overall objectives of the terms of reference and aims of the technical proposal to develop evidenced-based training for teachers and educational officers in order to enhance teaching and learning in ways that are meaningful to the context of primary and secondary classrooms. Specifically, we focused on the approaches to classroom

management, assessment practices and the use of differentiated instruction. In this respect, the review is formative as it forms the basis for professional development as well as future evaluation of the implementation of teaching strategies in the training programme.

The review includes:

1. Direct observation of classrooms which was undertaken over a three-day period (April 22- 24, 2012). A Classroom Observation Checklist (see Appendix 1) was developed to gauge the extent to which the constructivist practices embedded in differentiated teaching, assessment and classroom management strategies were being employed in primary and secondary classrooms. Four (4) Mathematics lessons and three (3) English Language lessons in MSS were observed. We believe that since these subjects form the core of the curriculum and the basis of much of students' learning throughout their school life that it was important to observe the practices in these classrooms and consider ways in which these approaches might impact on students' leaning and behaviour. Similarly, random lessons in grades one to six were observed in Brades and Look Out Primary Schools, St. Augustine Roman Catholic School and Lighthouse Academy.
2. Surveys of teachers and students were also conducted during the three days of fieldwork. Fourteen teachers in Montserrat Secondary School (MSS) completed the Teacher Questionnaires (see Appendix 2), and 95 students in grades 7 to 11 completed the Student Questionnaire (see Appendix 3). In respect of students, this was much more than we expected and therefore believe that this larger sample will provide robust findings of students' view of the teaching strategies in their classrooms.
3. Documentary analysis of previous reports (Review of Montserrat's Primary and Secondary Schools, 2011) and The MOE's Strategic Plan (2012-2017).
4. Analysis of performance data (2010 and 2011) from the Grade 3 and 5 national tests and CSEC (2006 – 2011).

5. Analysis of the national tests instruments and the alignment with the curriculum;
6. Group interviews with parents – three members of the Parent Teachers' Association of MSS attended the interview. Our discussion with them was candid and raised several key issues including the structure of assessment and the consequent streaming of students. However, they were disappointed at the short notice and were interested in us hearing the view of the broader parent community. We are therefore, keen to re-visit a meeting with a wider group of parents at MSS.
7. Informal conversations with Education Officers – these were particularly useful to clarify critical issues relating to the context of schools.

The methodological approach was deliberately mixed to ensure that the multiplicity of factors at play in schools and the ways teachers teach at varying levels of the system could be made explicit. We are cognizant that we are unlikely to generate data that reflects *all* the issues, concerns or practices. Nevertheless, we are reasonably confident that the data captured is sufficient to provide us with a coherent account of the interactions in classrooms, the key factors involved in delivering the curriculum to students at differing levels of ability, and, the challenges that emerge in the teaching and learning process. We expect that this data will help us to develop a training package that is contextual and grounded in the nuances of classrooms in primary and secondary schools. All quantitative data generated from the surveys and the classroom observations were analysed using SPSS. The qualitative data were thematically analysed using the main themes of behaviour management, assessment and differentiated learning.

Educational Policy Context in Montserrat

One of the major strategic objectives stated in the Montserrat Education Sector Operational Plan (2011 – 2012) is the "improved quality of teaching, learning,

assessment and recognition at all levels and abilities". This very important objective is intended to tackle the problem of student underachievement on national (Grades 3 & 5 National Standards Test) and regional (CSEC) tests. Further, the MOE in its TOR for the consultancy reported that:

> "Teacher efficacy in the classroom is at the centre of improving student achievement and maximising the potential of every child accessing educational opportunities. However, in some primary and secondary classes in Montserrat, instructional modalities are predominantly teacher-centred and not configured to cater to the multiple learning styles and needs of student".

The role of the classroom teacher in achieving the objectives cannot be overstated. One of the findings from a review of the school system by the MOE, indicated that:

> "there were demonstrable gaps in the quality of instruction. In some classrooms, teachers showed 'no evidence of lesson preparation to guide the teaching process' instruction is didactic and the instruments used to assess students were not 'adequate, valid or reliable'. Notably, teaching strategies were not sufficiently varied to cater to the diverse abilities of all students and the only evidence of differentiation was prepared assignments of varying difficulty given to pre-determined groups of students to assess their learning."

Guided by these findings, the MOE has embarked on what they have termed a comprehensive strategy for teacher development in its Strategic Plan (2011-2014) to improve the quality of teaching, learning and assessment at all levels. This will be achieved by providing regular in-service training opportunities for teachers to upgrade their competencies. Four key areas have been identified for improvement as listed below:

(a) the effective teaching of core subjects;

(b) differentiated teaching/learning;

(c) assessment of learning; and

(d) classroom management.

The findings have been well articulated and will provide guidance for the development of the in-service training programme.

CHAPTER 2: FINDINGS FROM THE SURVEY OF TEACHERS

This chapter aims to describe the views of teachers regarding their classroom practices and the ways in which they attempt to facilitate students' learning. Section One will examine the view of teachers at the Montserrat Secondary School, followed by the description of the views of primary level teachers at Brades and Look Out Primary, St Augustine Roman Catholic, and the Lighthouse Academy. The questionnaire included items on teaching strategies, use and availability of resources, professional development, and, curriculum policies and practices, and, their views on the effectiveness of the current curriculum strategies.

Montserrat Secondary School (MSS)

Characteristics of Teaching Service

Just over forty percent (13) of the teachers at MSS completed the teacher survey, 8 females and 3 males, with 2 persons not indicating gender. Overall the pattern of service indicated by teachers is diverse. Table 1 below shows that one third of the respondents (4) have been in the post between 3 and 10 years, while 3 persons have taught in the school for more than 20 years. At the same time, at least a third of the respondents (4) have been in the post for less than a year. This combination of new and experienced teachers, while having the advantage of continuity is also likely to create schisms in curricular approaches and variances in understanding of the schools' ethos with possible negative effects on student performance and behaviour.

Table 1: Pattern of Teaching Service

		How long have you been working as a teacher in this school?					
		My first year	1-2	3-5	6-10	More than 20 years	Total
How long have you been working as a teacher?	My first year	2	0	0	0	0	**2**
	3-5	1	1	1	0	0	**3**
	6-10	1	0	1	1	0	**3**
	More than 20 years	0	0	1	0	3	**4**
Total		**4**	**1**	**3**	**1**	**3**	**12**

Teacher Qualifications

Table Two below shows that most teachers at MSS are trained in specialist content areas, and are in some cases appropriately assigned, however, there is little teacher training. Interestingly, the rate of non-response to these questions is quite high, only 8 persons responded to the questions, with two of these persons not indicating their area of study. However, there is some indication that there might be a possible mismatch between content area training and subjects taught. For example, one mathematics teacher indicated holding qualifications in physical education, and one person with special education training indicated teaching English language.

The data shows considerable collective experience among staff. However, this is not undergirded by teacher training and certification. Current research (Darling-Hammond, 2000; Harris & Sass, 2007; Goe & Stickler, 2008) on teacher quality and teacher effectiveness conclude that the combination of teacher training and certification, content area knowledge and years of experience directly correlates with student achievement especially in Mathematics and the Sciences.

Table 2: Teacher Qualifications and Main Assignment

What was your major area of study?			What subject(s) do you teach in this school?				Total
			English Language	Mathematics	Studies/ Geography	Sciences	
	What is your level of education and major area of study?	Bachelors Degree	2				2
Biotechnology & Chemistry	What is your level of education and major area of study?	Bachelors Degree				1	1
Geology	What is your level of education and major area of study?	Bachelors Degree			1		1
History & Education	What is your level of education and major area of study?	Bachelors Degree			1		1
Physical Education	What is your level of education and major area of study?	Master's Degree		1			1
Secondary Mathematics	What is your level of education and major area of study?	Master's Degree		1			1
Special Education	What is your level of education and major area of study?	Diploma	1				1
	Total		3	2	2	1	8

Teachers' Perceptions of Curriculum Practice and Policy

Table 3 below describes the views of teachers regarding the curriculum policy and practice operating in MSS. For ease of analysis the five-point Likert scale of: strongly agree, agree, strongly disagree, disagree and don't know have been combined into a three-point scale of agree, disagree and don't know. The table shows the standard deviation, the mean score on each item and the frequencies of staff response on each item.

Overall, there appears to be some variability among teachers about how the curriculum is actually being implemented in MSS. While most disagree that a clearly articulated curriculum policy exists in the school, they all indicated that they had no problems choosing what to teach. At the same time there seems to be also general agreement about the contradictory nature of the range of curricular in existence. With four persons responding 'Don't Know' to this item, a likely interpretation is that they are not aware of the different curricula being used. Most also disagree that the teaching strategies they are expected to use are inconsistent. A possible conclusion here is that while the policy seems unclear to most teachers, they have somehow found a way to clarify their own practices, the basis of which might be defined by their specific content area.

Table 3: Teachers' Perceptions of the Secondary Curriculum

Perceptions of the Secondary School Curriculum	Agree	Disagree	Don't Know	Mean Score	Std. Deviation
I am aware of a clearly articulated curriculum policy in my school	3	7	2	2.75	1.055
The different curricula in use at my school are often contradictory	5	4	4	2.85	1.519
I often have difficulty choosing what to teach in my class	1	12	0	2.38	.650
The teaching strategy I am to follow in my classroom seem inconsistent	3	7	2	2.83	1.030
In this school, teachers who work with students at the same grade level use similar methods and cover the same content	5	2	5	2.75	1.658
I frequently plan and co-ordinate teaching with other teachers of the same grade	5	7	0	3.25	.965
When I begin to work with a new group of students I have detailed knowledge of what those students previously learned	5	6	1	3.08	.996
Students in this school are expected to master the content they are working on before moving to the next topic	8	3	1	3.58	1.165
Most of the students in my class can learn what I am suppose to teach	10	1	1	3.75	1.138
Teachers in this school are encouraged to experiment with new teaching methods in their classroom	11	1	0	3.92	.996

Most teachers also seem to agree that the mechanisms for planning and coordinating together, and knowledge of students when they move from one grade to another are absent or at best minimal. On the other hand most are clear regarding the general ethos of the school, particularly in relation to a culture of mastery of content, the notion that all students can learn and the need to try new methods. One could argue that while most teachers have grasped and are in agreement with the school's philosophy of student achievement and success, in practice appropriate mechanisms have either not been established for collaboration among teachers to implement the curriculum, or, if they have been

established, are not working as expected. This is particularly critical for new teachers to the school. For example, teachers in their first year at the school all agree that there is little or no collaboration with teachers of the same grade. They also agree that they do not obtain adequate information on students' performance. In fact, on this last issue even teachers with significant experience seem uncertain about this.

Overall, the data shows that experience as a teacher does not significantly influence views on these items. This means that teachers in their first year of teaching feel pretty the same as teachers with more years of experience. Similarly, teachers in their first year and up to two years in the post at MSS seem to have similar views to teachers in the post for some time. Except in the area of planning and co-coordinating with other teachers where all five teachers in their first year and up to two years in the post agree that this does not happen.

Teaching Methods

Based on table four below, it appears that students are exposed to the same aspects of the curriculum at the same time, with only some pockets of differentiation in what is taught. This is also confirmed by the 7 teachers who indicate that only a few times a month or rarely that students get a chance to work individually on activities that suit their needs. This aligns with the system of streaming in the schools whereby students are placed in classes based on their level of achievement. This way of streaming assumes that all students attaining similar grades on a test are of the same ability and therefore, differentiation is not necessary or is in operation at the class level rather the student level.

Table 4: Teaching Methods

Teaching Methods	Everyday	A few times a week	A few times a month	Rarely/Never	Mean Score	Std. Deviation
All students are taught the same things at the same time	7	2	1	0	3.60	.699
Students with the same level of ability or achievement are in one group	4	0	2	6	2.33	1.435
Students are grouped for co-operative learning	5	3	2	2	2.92	1.165
Students work individually on assignments that suit their needs	3	3	6	1	2.58	.996
Students with different levels of ability are in one group	0	4	5	2	3.18	.751
Students can choose their own group	0	1	5	4	1.70	.675

Nevertheless, co-operative teaching appears to be the main mode of teaching as 8 of the 12 teachers indicated grouping students this way. However, based on our observations of classrooms this is highly questionable, whereas chairs and tables were arranged co-operatively, activities and teaching were still along traditional lines. This will be further discussed in Chapter 4. While it appears that students with the same ability are more likely not to be in the same group (8/12), it does appear that mixed ability groupings may occur more frequently (9/12). However, students rarely or never get a chance to choose their own groups. While it seems that there are attempts to use student-centred, constructivist approaches, the unevenness of responses suggest that there might be varying understanding of the teaching strategies associated with the constructivist philosophy which underlines the curriculum. Of course, this might be explained by the absence of teacher training among the staff.

The Nature of Materials/Resources Used in Classes

Tables 5(a) and 5(b) below present teachers' use of instructional materials and resources and their views on the usefulness of same. While it is accepted that some materials/resources listed are not appropriate for all subjects, it is expected that teachers use a variety of materials and resources as a platform for motivating student learning, conveying information, and allowing them to act as "coaches, facilitators, resource guides and companions to learning" (Okiobia, 2011).

Table 5(a): Resources and Materials for Teaching and Learning

Materials/Resources	Everyday	Once or twice a week	Once in a month	Never or almost never	Mean score	Std. Deviation
When teaching my class I use text books:	7	3	0	1	3.45	.934
When teaching my class I use workbooks or worksheets:	4	6	1	0	3.27	.647
When teaching my class I use newspaper or magazine:	0	0	1	8	1.40	.966
When teaching my class I use novels / non-fiction:	0	0	1	8	1.11	.333
When teaching my class I use manipulatives, counters:	0	3	1	4	1.88	.991
When teaching my class I use past papers:	2	3	4	1	2.60	.966
When teaching my class I use internet:	2	4	5	0	2.73	.786
When teaching my class I use resource persons:	0	1	1	8	1.30	.675
When teaching my class I use multi-media:	2	2	1	6	2.00	1.265
When teaching my class I use storybooks:	0	1	0	9	1.20	.632
When teaching my class I use a overhead projector:	2	3	1	6	2.08	1.240

Table 5(a) above shows that the materials most likely to be used by teachers are textbooks and worksheets. Past papers and the internet appear to be used occasionally. This seems to corroborate the view below in table 5 (b) that materials for teaching are limited or absent. More than half of the respondents disagree that materials are outdated, in fact, most seem to agree that available materials and resources are useful for using different teaching methods, teaching main ideas and teaching students with special needs. The data in table 5(a) goes some way to confirm that teaching methods are largely traditional with heavy reliance on text books and worksheets. Incorporating a variety of materials and resources in subject teaching is likely to enhance collaboration among teachers, and between teachers and students. Hands-on approach facilitates cooperative learning activities and encourages students to engage all their senses in learning. Further, the use of technology, apart from the internet appears limited. Recent research confirms that the use of technology not only enhances the teaching and learning environment, and, promotes student learning, but also positively impacts students' behaviour (Lavin, Korte, & Davies, 2010).

Table 5 (b): Views on the Usefulness of Resources and Materials for use in Classes

	Agree	Disagree	Don't Know	Mean Score	Std. Deviation
Materials for teaching the subject are limited or absent	8	3	0	3.64	.924
Materials are outdated and unhelpful	3	6	0	3.11	.782
They are usually useful in teaching main ideas and concepts	9	1	0	4.00	.816
They are useful when using different teaching methods	8	2	0	4.00	.667
They are useful for teaching students at different levels	6	3	1	3.60	1.350
They address issues relating to gender	3	3	3	2.67	1.500
They are helpful for teaching students about good citizenship.	3	3	4	2.60	1.506
They are useful for teaching students with special learning needs.	6	2	2	3.40	1.578

Subject Preparation

In table six below, while there is some consensus that the curriculum and the prescribed materials are the basis for teaching, it does appear that teachers exercise some discretion in what is taught, and augmenting this content with internet based information. However, most teachers appear to avoid the use of curriculum materials provided by the school.

Table 6: Subject Preparation

	Agree	Disagree	Don't Know	Mean	Std. Deviation
I frequently refer and use the information in the curriculum document.	10	1	1	4.00	1.279
I frequently use the assigned text books and/ or the teachers' guide	11	1	0	4.33	.888
I frequently use the guide modified and provided by the school	2	8	1	2.64	.924
I frequently use whatever information I think should be taught	10	2	0	3.83	.937
I use web-based information related to the subject or topic	10	1	0	4.27	.905

Research on teacher quality and teacher effectiveness shows that teachers are more likely to positively impact student achievement if they are appropriately qualified with the requisite content knowledge, teaching skills, and, have access to resources and materials that allows them to create a facilitating learning environment. For example, Darling-Hammond (2000) writes, "If high-quality teachers lack strong curriculum materials, necessary supplies and equipment, reasonable class sizes, and the opportunity to plan with other teachers to create both appropriate lessons and a coherent curriculum across grades and subject areas, the quality of teaching students experience may be suboptimal, even if the quality of teachers is high". This means that, within MSS, the main concerns are not just teacher quality, but, also about teaching quality which is substantially

affected by the context of the classroom and the working conditions including the availability of resources and materials.

Strategies in Secondary Mathematics

The current sample of teachers included three Mathematics teachers. The summary below reflects the patterns of their responses.

Mathematics Instruction:

Teaching and learning in Mathematics appear to be based on directed approaches, with group and individual activities, whole class discussion and questioning. Teachers confirmed the use of text books and worksheets as the main mode of teaching and learning, and, very little use of technology.

Mathematics Assessment:

Tests, examinations and written homework and assignments are the main mode of assessing students, while, more authentic assessments techniques such as presentations and group work are less popular.

The Mathematics Curriculum:

The teaching of Mathematics at MSS appears to be largely based on the Caribbean Examination Council (CXC) CSEC syllabus. Other, Curricula in use are CCSLC and Key Stage 3 from the UK. The indication here is that an articulated Mathematics curriculum may not exist, and that teachers then teach to the syllabuses of the various testing bodies, rather than, teach the skills required for broader understanding of mathematical concepts. The following texts are in use: CCSLC Books 1+2; Keystone 8 & 9; Key Mathematics 8; Mathematics for the Caribbean Book 2; Mathematics: A complete course Vol. 1,2; CCSLC Books 1,2; Key Stages Books 3,4

Challenges and Obstacles in Mathematics Teaching:

The respondents agreed that the CSEC Mathematics syllabus and available text books were adequate for teaching. However, they indicated that the following were

challenges in teaching Mathematics: inadequate resources such as manipulatives, computer laboratory and software; getting planning time with colleagues; lack of support from the school administration and the Ministry of Education.

We asked the respondents, **'**what recommendations would you make to improve some of the above challenges or obstacles?' Below is the only response that was provided:

> "Too many of our students enter Montserrat without the needed or adequate content. We need to address this weakness as early as possible in Montserrat Secondary".

This specifically speaks to the requisite prior knowledge of Mathematical concepts that students enter school with. There is some expectation that teachers ought to be building on this prior knowledge rather than having to fill in the gaps in students' knowledge. While the sentiment is understandable given time and resources constraints, the statement does highlight the necessity to provide adequate support for struggling students, especially in core subjects such as Mathematics.

Strategies in Secondary English

The data shows that at least five teachers of English Language/Literature responded to the questionnaire, however, for the most part their responses are partial and some items were not addressed. For example, only one person responded to the question on the curriculum guides and this person reported that they did not use any of the following curriculum guides:

> CSEC English B Teaching Curriculum (by Celia Webster; CSEC English Syllabus (Effective for Examinations from May/June 2012); CSEC English Syllabus (Effective for Examinations from May/June 2012); English Language Curriculum for Grades 7-11 (Prepared by Debbie Harris)

Examiners' Reports from (CXC); Personally Created Curriculum for Syllabus; School/Department Created Curriculum or Syllabus.

English Language Teaching Strategies:

The following teaching strategies were indicated to be in use, which again this indicates teacher directed approaches.

Table 7: Teaching Strategies

Teaching Strategies	Used	Not Used
Arts Based Learning		√
Communicative Language/Literature Teaching		√
Computer Assisted Language/Literature Learning		√
Constructivism		√
Contextual Grammar	√	
English as a Second Language or English as a foreign Language		√
Literature in the Language Classroom	√	
Process Writing	√	
Reflective Teaching and Learning	√	
Writing Across the Curriculum		√

Five persons responded to the question of teaching strategies and they all indicated agreement with all of the following statements about his or her teaching strategies. However, given the small number of persons, there is no guarantee that this actually obtains in English Language teaching in MSS:

- Many students receive feedback from me about their performance
- I value the feedback I receive from my students about their strengths and needs
- I use student feedback to inform my decisions about lesson and unit plans
- My students have the opportunity to assess their own work as well as those of their peers
- I collaborate with colleagues in planning , teaching and learning activities in reading, writing and critical thinking

- I am involved in the decision making process in developing the reading and writing curricula for my department
- I am encouraged by the HOD to utilize a wide range of contextual teaching and learning strategies in my lessons.

Professional Development

The questions in this section seek to find out about the nature of professional development or in-service training in which teachers have participated. The data indicate that most teachers have not attended subject specific training courses. However, table 8 below shows that there has been participation in training that focuses on pedagogical approaches, particularly as it relates to the delivery of instruction in the classroom. Nevertheless, these appear to have been few, as most persons indicated that they have attended one to two sessions over the past three years. Given the lack of teacher training among the staff, these sessions can act as important foundational training.

Table 8: Professional Development

Professional Development Sessions Attended	8 or More Sessions	3- 7 Sessions	1 – 2 Sessions	None
I have attended Professional Development Sessions in Assessing students	0	1	5	3
I have attended Professional Development Sessions about Curriculum Materials	1	2	5	1
I have attended Professional Development Sessions about Teaching Methods	1	2	5	0
I have attended Professional Development Sessions about Using Technology in the Classroom	0	1	6	2
I have attended Professional Development Sessions about Differentiated Instruction	0	1	6	2
I have attended Professional Development Sessions about Classroom Management	1	1	6	0

The Nature of Collaboration among Staff

Respondents were asked to indicate how often over the past school any of the following situations listed in table 9 below occurred.

Table 9: Staff Collaboration

Collaboration and Modelling	More than 10 Times	6 - 10 Times	3 – 5 Times	One to two times	Never
Clarifying standards for student learning through discussion and analysis of students' class work	0	0	3	4	2
Develop thematic units to integrate teaching across different subject areas	0	1	4	4	4
Examining the changing scope and sequence of what is taught in your subject area	0	1	2	3	3
Examining the alignment of curricular materials and student assessment at this school	0	1	0	5	3
Learning how to use particular teaching strategies	0	2	2	2	3
I watched another teacher model teaching strategies	0	0	0	2	8
Another teacher observed me teaching and gave me feedback	1	1	0	4	4
I watched another teacher teach and gave him/her feedback	0	0	0	1	9

The data indicate that these situations occur from time to time, however, especially modelling of instructional strategies. The items on collaboration corroborate the earlier finding that there was little working together among the staff.

Effectiveness of the Curriculum

This section seeks to 'give voice' to teachers regarding their concerns with the existing curriculum and associated teaching and learning strategies. While the general view is that the existing curriculum (although not specified, most references to 'curriculum' in the context of MSS is likely to be CSEC and Key Stage 3 syllabuses) enables appropriate teaching strategies. There appears to be general agreement that the key issue in the delivery of curriculum strategies is the limited

availability of resources including laboratories and manipulatives for hands-on activities.

For example, when asked:

In what ways does the current curriculum and associated teaching strategies in your subject area adequately provide learning opportunities and activities that will facilitate students' achievement?

Teachers responded in the following ways:

- Business Curriculum does not specify but I use video and case studies to enhance learning. Accounts - Text is very straight forward provides adequate activities. EDPM Curriculum dictates much hands-on computer exercises but resources are not always available. Office text is somewhat adequate but I use case studies and simulation to highlight concepts.

- Clear curriculum has not been set out

- It allows students to think critically, link the current content to the physical and social environment

- It provides several avenues for hands-on activities as well as marriages between and among topics that will help students to better understand the math concepts.

- Teaching strategies are geared towards developing thinking, reading, communication

- The curriculum provides the appropriate level of materials for each class, however some of the teaching strategies such as lab sessions are limited due to limited laboratory area materials.

Teachers were also asked:

To what extent do you think there is a link between the primary and secondary curriculum?

The following responses were provided:

- Not knowledgeable about the primary curriculum but one shows support for the other;

- The link should be paramount but it appears to be nonexistent at the moment;

- The primary curriculum should be the basis on which the secondary curriculum is built, but still there are a lot of students who are not fully competent in simple computations that should have been mastered from primary school;

- The present link needs to be looked at again.

Any other comments about your teaching strategies in your subject area?

- My subjects are not for the most part ones that allow much room for a lot of variation in teaching styles in my opinion. However I employ whatever tools I find to make the subject content and exemplars as interesting as possible.

Summary of Key Findings

1) The data show that teachers are engaged with their teaching, possess considerable training and qualifications in their subject areas and 'buy-in' into the philosophy of student achievement and improving performance.
2) There is also adequate teaching experience among staff members to allow for more experienced teachers to model 'good' teaching practices to new staff as a means of orientating them to teaching in the school;
3) At the same time, most persons have not undergone teacher training and acquired such certification;
4) Most persons indicated that they are not aware of a clearly articulated curriculum policy, although, they indicated being able to adequately deliver instruction.
5) They also agree that the curriculum and its associated strategies is a good basis for teaching.
6) At the same time, they indicate that the range of curricular in operation is contradictory.
7) General agreement that there is little opportunity for collaboration among staff. In particular, opportunities for planning and coordinating with colleagues teaching the same subject were limited.

8) Teaching and learning is mostly teacher-directed with very little differentiation and opportunities for discovery learning and student autonomy.
9) Although most persons indicated the use of cooperative learning and in some instances mixed-ability grouping, the actual practice in teaching and learning is doubtful.
10) Respondents agreed that text books were adequate for the task, however, the findings highlight that other materials and resources, especially technological resources are insufficient.
11) Notwithstanding the lack of resources, most persons agreed that available resources are useful for using different teaching methods, teaching main idea and teaching students at different ability levels.
12) Teaching strategies in Mathematics also seem to be teacher-centred with emphasis on the use of textbooks and worksheets.
13) Similarly, assessment of students appears to be predominately paper and pencil, with little use of performance assessment techniques.
14) The challenges in teaching Mathematics are as with the other areas, a lack of technological and mathematics related resources.
15) English language strategies also appear to be teacher-centred and text book oriented with little opportunities for experiential learning.
16) Professional development and in-service training in pedagogical approaches appear to occur infrequently.

Primary School Teachers

This section reports on the views of Primary School Teachers at Brades, and Look Out Primary, St. Augustine Roman Catholic and Lighthouse Academy. Similar to teachers at Montserrat Secondary School, primary teachers were asked to respond to a questionnaire to describe their teaching strategies.

Characteristics of Teachers' Service

The survey was completed by twenty-two (22) teachers across the four schools. The distribution of teachers in the sample is illustrated in table 10. The distribution is fairly even across the schools, with half of the teachers teaching grades 1 to 3.

Table 10: Distribution of Teachers Responding to the Survey

	School level you serve:			
School	Pre K- Kindergarten	Primary (Grades 1-3)	Primary (Grades 4-6)	Total
Brades Primary School	0	3	4	7
Lighthouse Primary	0	2	0	2
Look Out Primary School	1	3	3	7
St. Augustine Primary School	1	3	2	6
Total	2	11	9	22

The data shows (table 11) substantial experience among the sample of primary teachers, with nearly half of them reporting more than 20 years service as a teacher. Only three teachers reported being in their first year of teaching. Additionally, the pattern of tenure shows stability among staff, 9 teachers indicated being in post in the same school for 6 to 10 years. Also notable is that 4 of those persons have been teaching for more than 20 years.

Experienced teachers have been shown to have positive effects on student achievement (Rice, 2003; Darling-Hammond, 2000) in reading, mathematics and science in elementary schools (Harris & Sass, 2007). Of course, years of experience

are only one factor that affects teachers' effectiveness at the primary school level. Importantly, primary teachers are expected to understand young children, how they learn and how to teach them, including how to assess them, scaffold and differentiate learning, and how to support students who have different learning abilities. This ability cannot be understated in elementary education and is developed and enhanced through years of experience as well as rigorous teacher preparation. Generally, the extent of experience seen in table 11 and the level of content knowledge and teacher training (table 12) indicated by teachers should augur well for Montserrat's primary students. At the same time, significant years of service may also mean that some teaching strategies that disadvantage some students may become the standard and overtime contribute to under-achievement.

Table 11: Teaching Experience of Primary Teachers

		How long have you been working as a teacher at this school?							
		This is my first year	1-2 years	3-5 years	6-10 years	11-15 years	16-20 years	More than 20 years	Total
How long have you been working as a teacher?	This is my first year	1	0	0	0	0	0	0	1
	3-5 years	1	0	2	0	0	0	0	3
	6-10 years	0	0	1	2	0	0	0	3
	11-15 years	1	0	0	1	0	0	0	2
	16-20 years	0	0	1	2	0	0	0	3
	More than 20 years	0	1	1	4	1	2	1	10
Total		3	1	5	9	1	2	1	22

Table 12: Primary Teachers' Qualifications

		What is your level of education and major area of study?					Total
		Certificate	Diploma	Associates Degree	Bachelors in Education (B.Ed)	Bachelors Degree (B.Sc/ BA)	
What is your major area of study?	Missing	4	0	2	1	0	7
	Administration	0	0	0	1	0	1
	Child Psychology	0	1	0	0	0	1
	Early Childhood Education	1	0	0	1	1	3
	Management Studies	0	0	0	0	2	2
	Mathematics	1	0	0	0	0	1
	Primary Education	0	1	2	0	0	3
	SEN	0	0	0	0	1	1
	Sociology	0	0	0	0	2	2
Total		6	2	4	3	6	21

Primary School Teachers Perceptions of Curriculum Policy and Practice

Table 13: Curriculum Policy and Practice

Curriculum Policy and Practice	Agree	Disagree	Don't Know	Mean	Std. Deviation
I am aware of a clearly articulated curriculum policy in my school	14	3	1	4.00	1.138
The different curricula in use at my school are often contradictory	9	12	-	3.33	.658
I often have difficulty choosing what to teach in my class	5	15	1	2.71	.902
The teaching strategy I am to follow in my classroom seem inconsistent	4	15	-	2.89	.875
In this school, teachers who work with students at the same grade level use similar methods and cover the same content	3	2	6	2.18	1.401
I frequently plan and co-ordinate teaching with other teachers of the same grade	2	11	-	2.85	.899
When I begin to work with a new group of students I have detailed knowledge of what those students previously learned	11	12	-	3.43	.945
Students in this school are expected to master the content they are working on before moving to the next topic	4	19	-	3.91	.515
Most of the students in my class can learn what I am suppose to teach	22	1	-	4.22	.518
By trying different methods I can significantly affect my students' achievement level	23	-	-	4.65	.487
Teachers in this school are encouraged to experiment with new teaching methods in their classroom	21	-	1	4.41	.908

As pointed out earlier, the presence of a coherent curriculum is an important variable for teacher effectiveness. Unlike the teachers at MSS, primary teachers are largely in agreement that they are aware of an articulated curriculum. Examination of table 12 above points to generally positive attitudes among primary teachers, most of who seem to agree that not only is the curriculum consistent, they are very much aware of what is required of them as teachers. Again, this is somewhat different from the Secondary teachers who seem to have less confidence in the

curriculum, and if we might speculate a bit, seem not to own the curricula processes in that school. In other words, the primary teachers in this study seem to have bought into implementing the primary curriculum. However, like the teachers at MSS, primary teachers are reporting that there is little collaborative working among them to plan and co-ordinate lessons.

Table 14: Teaching Methods

Teaching Methods	Everyday	A few times a week	A few times a month	Rarely or Never	Mean	Std. Deviation
All students are taught the same things at the same time	10	8	1	2	3.24	.944
Students with the same level of ability or achievement are in one group	10	5	2	4	3.00	1.183
Students are grouped for cooperative learning	7	7	5	2	2.90	.995
Students work individually on assignments that suit their needs	11	2	6	3	2.95	1.174
Students with different levels of ability are in one group	7	5	5	4	2.71	1.146
Students can choose their own group	-	2	8	9	1.63	.684

Table 14 above illustrates that teaching methods are likely to be varied depending on, for example, the nature of the subject being taught, although it is expected that most teachers should employ interactive and participatory approaches. While nearly half of the teachers indicate that all students are taught the same thing at the same time, half also indicated that students work individually on activities that suite their needs. This seems to be at odds since the whole class approach does not necessarily facilitate individualised instruction and assessment. At the same time mixed ability groups appear to be used less frequently than streaming by ability and/or achievement.

Use of Materials and Resources for Teaching

Table 15: Materials and Resources for Teaching and Learning in Primary Schools

	Everyday	Once or twice per week	Once in Month	Never	Mean	Std. Deviation
When teaching my class I use text books:	9	6	-	2	3.29	.985
When teaching my class I use workbooks or worksheets:	9	7	1	1	3.33	.840
When teaching my class I use newspaper or magazine:	-	3	7	8	1.72	.752
When teaching my class I use novels / non-fiction:	3	3	5	4	2.33	1.113
When teaching my class I use manipulatives, counters:	9	6	2	2	3.16	1.015
When teaching my class I use past papers:	-	2	6	8	1.63	.719
When teaching my class I use internet:	2	9	-	6	2.41	1.121
When teaching my class I use resource persons:	1	3	4	9	1.76	.970
When teaching my class I use multi-media:	2	5	5	4	2.31	1.014
When teaching my class I use storybooks:	7	10	1	1	3.21	.787

The results here are similar to the responses from the high school. Most primary teachers indicated using textbooks and worksheets everyday or at least once or twice per week. Nearly half of the teachers in table 15 above indicated that they use manipulatives everyday, 6 said that they use these at least once or twice per week.

The use of concrete methods to teach Mathematics is noted to enrich the teaching and learning experience for students especially when students are able to directly interact with the materials. Recent research shows that not only is the use of instructional materials important for teacher effectiveness, they are also critical for student behaviour and for enhancing student learning of difficult concepts in the core subject areas (Chingos & Whithurst, 2012). Below in table 16, while most teachers agree that instructional materials are absent or limited, there is general agreement that existing resources are useful for promoting learning.

Table 16: Usefulness of Materials and Resources

	Agree	Disagree	Don't Know	Mean	Std. Deviation
Materials for teaching the subject are limited or absent	13	6	-	3.79	1.134
Materials are outdated and unhelpful	4	17	-	2.90	.944
They are usually useful in teaching main ideas and concepts	18	2	-	3.90	.944
They are useful when using different teaching methods	17	4	-	3.90	.700
They are useful for teaching students at different ability levels	16	5	-	3.71	.956
They address issues relating to gender	6	9	4	2.63	1.165
They are all designed for students who are functioning at the same level	7	8	3	3.06	1.162
They are useful for teaching students with special learning needs	7	7	3	2.71	1.213

In other words, the textbooks, workbooks, story books and manipulatives that are frequently used have been able to help teachers, teach main ideas, use different teaching strategies and teach students at different ability levels. In table 17 below, although teachers indicated in the previous tables that technology resources are infrequently used in their classes, they seem to use the internet for information to teach with. The missing link here is the interaction between students and the internet because of limited availability. Overall, the curriculum and the associated

guides appear to form the basis of teaching, although teachers also say that they teach what they think should be taught. The concern here is likely to be the extent to which there are differences in the way that teachers may perceive and understand what is to be taught. Preparation is another important variable in the bundle of factors that affect teacher effectiveness and consequently, student achievement and behavioural outcomes.

Table 17: Subject Preparation

	Agree	Disagree	Don't Know	Mean	Std. Deviation
I frequently refer and use the information in the curriculum	21	1	-	4.41	.734
I frequently use the assigned text books and/ or the teachers' guide	18	1	1	4.05	.686
I frequently use the guide modified and provided by the school	16	1	3	3.70	1.261
I frequently use whatever information I think should be taught	17	2	-	3.95	.780
I use web-based information related to the subject or topic	20	1	-	4.14	.655

Teaching Primary Mathematics

The mean scores in table 18 below indicate an overall positive response to the teaching of mathematics. Notwithstanding teachers' generally positive outlook, the results are also indicating that the availability of instructional resources and materials called for in the curriculum are inadequate. Interestingly, 15 of the 21 teachers indicated that they find some Mathematics topics challenging to teach, at the same time, 18 teachers say that they enjoy teaching primary Mathematics. This might appear contradictory, however, the issue is likely to be teachers' perception of their own confidence and self-efficacy with the subject, and, the epiphanies and satisfaction that teachers get from helping students to understand some concepts. Of course, the concern here is that teachers are likely to mainly focus on the topics for which their knowledge is strong. The matter of teachers' mathematical

knowledge and competence cannot be understated at any level of the school system, and particularly in primary schools. Hill, Rowan and Ball (2005) have shown that teachers' mathematical knowledge is directly correlated with student achievement in grades 1 and 3. Additionally, teachers also indicated fairly high levels of preparedness and planning to teach the subject, and, the use of a variety of strategies to aid students learning including marking students' books, using songs and games, using manipulatives and encouraging problem solving.

Table 18: Mathematics Teaching in Primary Schools

Teachers attitude towards teaching Mathematics	Agree	Disagree	Don't Know	Mean	Std. Deviation
I enjoy teaching primary school mathematics	18	1	-	4.42	.607
The Revised Primary Mathematics Curriculum (RPC) is easy to follow	20	1	-	4.52	.750
The resource that are recommended in the RPC are available at my school	8	11	1	3.30	.979
I am clear about what and how I am expected to teach mathematics	19	2	-	4.33	.658
The textbooks/ workbooks from the MOE adequately cover the curriculum	9	6	1	3.50	1.033
I plan for all my mathematics lessons	19	2	-	4.24	.625
I find some mathematics topics challenging to teach	15	6	-	3.76	.944
I use different ways such as games, songs, dance, stories and poems to teach my students mathematics	19	1	-	4.45	.605
I allow my students to work with their classmates to do mathematics in the class	21	-	-	4.33	.483
I show my students how to use mathematics in school and out of school	21	-	-	4.33	.483
I get angry with my students in the class when they make mistakes doing mathematics or take some time to understand the mathematical concepts	4	16	-	2.75	.786
I engage my students as much as possible in numeracy and problem-solving	20	-	1	4.24	.889
I use manipulatives such as fraction tiles, bottle caps and marbles to teach my students	18	1	1	4.05	.999
I work math problems on the chalkboard for my students and then give them the same kind of work to do at their desks	16	-	-	4.44	.512
I am always willing to listen to my students in the classes	21	-	-	4.52	.512
I am aware of my students' needs in the classes	20	-	-	4.40	.503

Teachers attitude towards teaching Mathematics	Agree	Disagree	Don't Know	Mean	Std. Deviation
I mark the students' work during classes	18	2	-	4.05	.686
I make use of technology in the classroom when possible	18	3	-	4.05	.740
I frequently provide feedback to my students about their performance	16	1	-	4.24	.562
I have some posters about mathematics on the walls in my classroom	17	4	-	4.10	.944
I have additional work for those students who finish the assigned class work quickly	18	1	-	4.16	.688
I rely heavily on the textbooks for information	3	15	1	2.74	.933
The expectations of the mathematics curriculum are too demanding for the grade	2	16	1	2.63	.806
I think too many hours are allotted for mathematics lessons	-	21	-	2.52	.512

Challenges and Obstacles in Teaching Primary Mathematics

The following statements regarding the challenges and obstacles in teaching mathematics are teachers' own words which we have found to provide significant insight into the thinking that goes into approaching the teaching of the subject, as well as, teaching students generally.

1. Certain resources are needed for individual pupils to manipulate thoroughly in order to grasp some of the concepts presented. These resources are often limited or absent.

2. Children lack prerequisite skills that are needed to assist in mastering concepts.

3. Getting worksheets photocopied. The use of the only projector in the school.

4. Lack of Resources

5. Lack of Teacher's guide in the teaching of Mathematics at the Kindergarten level. Lack of workbooks for children, lack of internet access in the classroom that can be used for playing interactive Math games.

6. Making enough manipulatives for individual work and getting the children to understand that they need to be cared for. Obtaining resources through MOE is very harassing and a run around.

7. Not sufficient resource materials and worksheets available.

8. Pupils attitude towards learning, limited resources (material and human)

9. Some of the children are at a lower level compared to their pairs in reasoning and computing, so it takes time to bring them up to their expected level.

10. Sourcing additional work for those students who finish quickly. The real needs of students in my class.

11. Students ability to memorize their time tables, remain focused throughout the whole process of solving problems.

12. The Mathematics curriculum is the easiest curriculum to understand and deliver. It is broken up in terms and weeks and shows the teacher clearly what needs to be taught.

13. There are not enough manipulatives to teach the subject area. Students do not have workbooks to practice the concepts taught.

14. Too many topics to be covered within the year.

15. Understanding some concepts, students negative attitudes and hands on resources.

Teachers' Recommendations for Improving Mathematics Teaching and Students' Achievement

The following statements are teachers' suggestion regarding what might be done to improve Mathematics teaching in the primary schools:

1. Curriculum- text books must cover the curriculum.
2. Availability of text books and other resources.
3. Encourage students to play more Mathematics games on the computer.
4. Make workbooks and textbooks available for each child in each class.
5. Ensure that each class has the necessary manipulative for each topic to be taught.

6. More use of games, Mathematics brain quizzes and competitions, availability of materials to improve mathematics results.
7. Provide more resources so that teachers can make teaching aids.
8. Providing the school with at least two or three projectors, obtaining a new photocopier, paying subscriptions for teaching websites.
9. Put on regular training workshops for teachers, integrate and use a variety of materials to gain interest.
10. Textbooks and workbooks should cover the curriculum.
11. The ground work has been done in terms of the curriculum. However in the delivery of certain topics in this area assistance is needed.
12. Manipulatives and more hands on material need to be provided as this can assist a vast number of students
13. The inclusion of interactive computer games and more use of the creative arts-poems, songs, drama etc.

Teaching English in Primary Schools

The data in table 19 shows that while most teachers agree that the curriculum guide is sufficiently detailed to provide them with a clear direction for teaching literacy skills, just over half would argue that they are not clear about the Ministry's objectives for literacy development. Nearly half of the teachers have indicated that they do not believe that the attainment targets and activities listed in the curriculum guide can be achieved in the allotted time.

Contrary to the belief that anyone can teach literacy and language skills as long as they have had some tertiary training, the teaching of literacy skills and reading in particular is a highly specialized skill. The items in table 20 below were designed to assess the extent to which teachers were able to meet the demands of teaching literacy to primary students. For example, only 10 of the primary teachers said they were trained to use Reading Inventories and only 5 said that they did a Miscue Analysis when they listen to students read. Research shows that these are

important teacher skills for diagnosing students' reading level, and consequently, developing appropriate interventions to assist struggling students.

In terms of teaching strategies, teachers are generally positive about their use of a variety of methods to teach vocabulary, decoding skills and comprehension. However, it is not clear what these strategies are, or whether they are appropriate for the grade level, particularly the early years between K and grade 2 which require special skills to lay a robust foundation for young students. Essentially, teaching students to read and use language are fundamental skills for all the other content areas in the primary and secondary school system (Klein, 2008). Moreover, where these skills tend to be weak or absent, behavioural concerns usually arise in the student population (Matthews, Kizzie, Rowley, & Cortina, 2010; McIntosh, Horn, Chard, Dickey, & Bran, 2008). This researcher's observation of a grade 7 English Language Class (lower stream) at MSS was illustrative of this notion. Most of those students, especially the boys were somewhat reticent to engage with the text and created several diversions and distractions throughout the lesson such that the teacher spent nearly three-quarters of teaching time trying to settle students and get them to focus.

However, there seems to be some uncertainty around teaching mixed ability groups and students with special needs. One clear area of need is the involvement of parents in their children's literacy development. Interviews with parents however, revealed that they did not have access to the books being used in the classrooms and this was a major inhibiting factor in their participation.

Table 19: Teaching English in Primary Schools

Teachers Attitude and Experiences of Teaching Language Arts/Reading	Agree	Disagree	Don't Know	Mean	Std. Deviation
The curriculum guide provides detailed instructions for promoting language arts/ literacy	14	4	2	3.50	1.051
I cater to different learning styles in the classroom	22	-	-	4.23	.429
I group students based on their ability	18	4	-	4.00	.617

Teachers Attitude and Experiences of Teaching Language Arts/Reading	Agree	Disagree	Don't Know	Mean	Std. Deviation
Read-alouds are an important part of my literacy development programme	20	1	-	4.48	.602
I use a variety of strategies to teach comprehension	20	1	-	4.14	.854
I use a variety of strategies to teach word decoding skills	20	1	-	4.19	.512
I use a variety of strategies to teach vocabulary development	20	2	-	4.18	.588
I frequently engage in pre-reading activities	22	-	1	4.09	.793
I frequently engage in after-reading activities	18	2	1	4.00	.894
The attainment targets and activities listed in the curriculum guide can be easily achieved in the time allotted	5	9	3	2.71	1.105
I am fully equipped to cater to student's literacy needs in mixed ability grouping	9	7	3	3.11	1.197
I find the reading texts culturally relevant	9	6	2	3.29	1.105
The students find the assigned reading text interesting	12	2	2	3.62	1.258
I model the English language and literacy practices so my students can follow	20	-	1	4.10	.852
I allow my students to initiate and lead discussions on relevant curriculum areas	17	2	1	3.95	.887
I have been trained in the use of Reading Inventories to assess students' reading level	10	8	1	3.42	1.017
The more materials I have to read on literacy teaching and curriculum the better I will teach	13	1	4	3.56	1.504
If I have one or two clearly written materials on literacy teaching for my grade that would be more helpful	14	3	1	3.72	.958
I use informal methods of literacy assessment (e.g. anecdotal notes and teacher student conferencing)	10	5	1	3.56	.892
Parents of my students are very involved in the development of their children's literacy skills	3	9	6	2.22	1.114
I allow my students to engage in silent reading daily	13	6	-	3.55	.686
When I listen to a student read I usually do a miscue analysis	5	3	3	2.82	1.328
My students engage in writing activities for at least 40 minutes per day	12	5	1	3.61	.979
For assessment, I normally allow my more advanced readers to write while the less advanced will draw or role play	4	12	-	3.06	.680

Teachers Attitude and Experiences of Teaching Language Arts/Reading	Agree	Disagree	Don't Know	Mean	Std. Deviation
I have adequate age appropriate materials and professional support to help students with reading/ language difficulties	6	12	1	3.26	1.046
I am quite clear on the MOE policies and objectives for literacy development in Montserrat	7	12	1	3.10	1.071
The language Education Policy guides the way I treat the language teaching	8	7	2	3.12	1.269
I have participated in at least one language Arts/Reading workshop for the past year	17	2	1	3.90	.852
I have benefitted from advice of the principal or senior teacher.	18	1	-	4.16	.688
Students' performance on MOE administered tests guide my instructional focus	9	6	2	3.35	1.057
Students' performance on the Grade 3 & National Exams guide my instructional focus	8	7	2	3.24	1.091
The curriculum allows me to select appropriate content for the grade level I teach	14	4	1	3.79	.918
The Language Arts curriculum content is too advanced for the grade level I teach	3	14	3	2.78	.808
The Language Arts curriculum content is too simple for the grade level I teach	-	13	3	2.38	.806
Most students in my class struggle with the curriculum content of the grade I teach	-	13	1	2.57	.646

Professional Development

It is clear from Table 20 that most teachers in the primary schools have been exposed to some aspects of in-service training in specific subject areas, as well as, pedagogical practices in these areas. However, with a mean score below 3 on each of these items the average time spent in these training situations is likely to be around 6 to 10 hours, which is largely inadequate to help teachers assimilate requisite knowledge and skills. Further collaboration within the schools among teachers to improve and strengthen pedagogical practices (table 20) appears to be minimal.

Table 20: Professional Development in the Core Primary Curriculum

	None	1-5 Hrs.	6-10 hrs.	11-15 hrs.	16 or more hrs.	Mean	Std. Deviation
Over the past 3 years, about how many hours of professional development training/ workshops have you had that covered curriculum, assessment, teaching strategies and behaviour management in language arts?	2	1	5	1	8	2.71	1.448
Over the past 3 years, about how many hours of professional development training/ workshops have you had that covered curriculum, assessment, teaching strategies and behaviour management in mathematics?	2	2	5	-	6	2.40	1.502
Over the past 3 years, about how many hours of professional development training/ workshops have you had that covered curriculum, assessment, teaching strategies and behaviour management in reading?	4	3	1	6	-	2.07	1.817

This is similar to the situation that pertains at MSS. It is likely that both time and resource constraints, as well as, the absence of a collaborative culture contribute to this distance between teachers on the ongoing development of their practice.

Table 21: Professional Development of Primary Teachers

	Never	1-2 Times	3-5 Times	6-10 Times	More than 10 Times	Mean	Std. Deviation
During this school year, how often did you work with other teachers on Clarifying standards for student learning through discussion and analysis of students' classwork?	5	6	-	1	2	1.21	1.424
During this school year, how often did you work with other teachers on developing thematic units to integrate teaching across different subject areas?	8	6	1	1	-	.69	.873
During this school year, how often did you work with other teachers on examining and changing the scope and sequence of what is taught in your subject area?	4	3	4	3	-	1.43	1.158
During this school year, how often did you work with other teachers on examining the alignment of curricular materials and student assessment at this school?	3	7	4	1	-	1.20	.862
During this school year, how often did you work with other teachers on learning how to use particular teaching strategies	1	7	5	3	1	1.76	1.033

Table 22: Teacher Peer Evaluation

	Never	1-2 Times	3-5 Times	6-10 Times	More than 10 Times	Mean	Std. Deviation
This school year, how often did you watch another teacher model teaching strategies?	7	4	4	3		1.45	1.395
This school year, how often did another teacher observe you teaching and gave you feedback?	5	7	5	-	2	1.32	1.204
This school year, how often did you watch another teacher teach and gave him/her feedback?	14	4	1	-	-	.32	.582

Although, there is significant experience among teachers in the primary schools, it seems there is very little sharing of practices and teaching methods. At the same time it appears that there are pockets of modelling teaching approaches, this researcher suspects that the modelling which takes place is done to aid new teachers and as a means of orientation. If this is the case, then it is expected that teaching strategies are similar in the schools where this occurs. If not, schools, teachers and students are at a disadvantaged, on the other hand, it is also a means of transmitting 'bad' practices and must be properly structured to ensure that the process is beneficial.

Effectiveness of the Primary Curriculum

This section brings together the views of teachers regarding how well the existing primary curriculum is able to prepare students for the next stage of their education. Earlier in the report we showed that the view of secondary teachers is that there is a disconnect between the primary and secondary curricula and that students exiting primary schools are not prepared with the foundational knowledge of essential concepts, for example in Mathematics. The comments from

teachers suggest that they have both philosophical understanding and acceptance of the need for the curriculum at both levels of the education system to be functionally aligned. The following comments were made:

- As I am not aware of how the new system at MSS works I cannot honestly comment. However ideally it should be linked through a scaffolded approach to teaching and learning.

- It is like building a house. Primary teachers lay the foundation and the secondary teachers build on the foundation laid. The curriculum is a spiral one.

- The primary curriculum is the foundation for the secondary curriculum. Once students have covered the primary curriculum adequately, then they should be able to comfortably build on it.

- The primary school teaches the foundation and lays the base for each child to function properly at the secondary level.

- The primary sets the foundation while the secondary builds on that foundation to more complex ideas/concepts.

- To a great extent the primary curriculum is the foundation

However, teachers seem to believe that the effectiveness of the curriculum is constrained by a lack of resources to practice a variety of teaching methods including differentiated teaching. At the same, they expressed the view that as long as they implement the appropriate teaching strategies, the curriculum will work to enable all students to learn.

- The curriculum that I am exposed to has suggested teaching and learning activities that can help me to be better able to use associated teaching strategies. I frequently research through the internet and compile ideas and exercises to motivate teaching/learning in the classroom to effectively teach so that students can achieve.

- Differentiation and Assessment is encouraged by the MOE and the Head Teacher.
- Differentiation is encouraged by MOE and principal. However resources are lacking to do this effectively.
- It is encouraged however, resources (ICT, textbooks and teacher workbook) to accompany the curriculum are limited and in some cases missing, thereby directly impacting its effectiveness.
- The content of the various curricula are relevant to the students' grade level. Therefore, if an appropriate strategy is used to teach pupils it will have a positive impact on pupils' academics.

Summary of Key Findings

1. Extensive teaching experience among primary teachers, with, nearly a third of the responding teachers indicating teacher training.
2. Teachers indicated being aware of the primary curriculum and were in agreement that the curriculum for promoting teaching and learning at all levels of the primary schools system.
3. As such, most teachers in the primary schools seem to have bought into the idea of implementing the curriculum.
4. Some teachers indicated that they were unclear about the objectives for literacy development, and consequently what this means for teaching and learning.
5. As with the secondary school, the use of textbooks and worksheets are the primary material resources. Some teachers also said that they frequently use manipulatives to teach mathematics.
6. Most teachers agree that resources and materials are limited especially technology related resources and materials for using hands-on and concrete

teaching methods that allow students to directly interact with the resources. This was one of the main challenges of teaching mathematics.

7. Another was that although some teachers indicated that they enjoyed teaching mathematics, nearly half of the teachers said that they had challenges teaching some topics.

8. Regarding the teaching of literacy, it would appear that most teachers are not equipped with the requisite skills to identify specific difficulties in reading and there is also some uncertainty about teaching mixed ability groups.

9. Similar to the secondary school, exposure to professional development that intersects subject knowledge and pedagogical strategies are limited.

CHAPTER 3: FINDINGS FROM THE SURVEY OF STUDENTS AT MONTSERRAT SECONDARY SCHOOL

In this chapter we will present the findings of students' views of teaching strategies and assessment in their school. The aim is to match student experience and views with those of their teachers, as well as to identify existing strategies which students seem to think are working on their behalf. It is widely accepted that students often hold positive views of their teachers and their experiences of schooling when their lessons are engaging, the teaching methods are varied and teachers allow them to fully participate in activities and collaborate with each other.

Profile of Students

Ninety-eight (98) students responded to the questionnaire, 86 of the students indicated their gender of which 53.3% were females and 47.7% were males. The majority of students were between 14 and 17 years old with only 8 students falling in the 12 – 13 age group. It is likely that with this level of skewness, the data will not reflect the experiences of students in the lower grades. At the same time we expect that older students have had time to make sense of their schooling at MSS and are aware of the factors impacting their learning and, as such are more likely to be able to 'name' or describe their experiences. In other words, we expect that they hold an informed view of their schooling. In fact table 23 shows that the majority of students were from Grades 10 and 11. Additionally, only 4 of the students indicated that they had repeated a grade with two persons specifying that they had repeated Grades 9 and 10.

Table 23: Grade of Students Responding to Survey

Grade Level	Frequency	Percent
Grade 7	3	3.1
Grade 8	16	16.3
Grade 9	16	16.3
Grade 10	38	38.8
Grade 11	25	25.5
Total	98	100.0

Students reported that they were involved in a wide range of extra-curricular activities, these include: all sports, Art, Music and Singing, Woods, Clothing and Textile, Cadet Corps, Debating, Food and Nutrition, Agriculture, Path Finders, Interact Club, Dance, Peer Education, and, the Inter-Schools Christian Fellowship.

Students' Views of the Teaching and Assessment Strategies at MSS

Table 24: Secondary Students' Views of Teaching and Assessment Strategies

	STUDENT RESPONSES (out of 98 students)					
Teaching Strategies	Frequently Used	Not Frequently Used	Most Effective	Least Effective	Enjoy Least	Enjoy Most
Music, Dance, Drama, Art	10	67	14	16	9	24
Workshops	14	52	7	18	9	9
Teacher Talk/Lecture style	38	44	21	15	18	21
Resource Persons	21	43	10	11	15	5
Whole Class Discussion	31	56	35	7	10	40
Hands-on problem solving activity	22	58	30	10	14	32
Computer - Subject Specific Software	27	55	31	5	10	39
Internet Materials	24	57	26	10	9	31
Group Work	43	48	30	9	17	34
Worksheets	39	46	25	16	21	14
Magazines, Novels, Newspapers	14	56	7	16	16	15
Brainstorming ideas, concept maps	25	52	20	10	21	14

Teaching Strategies	STUDENT RESPONSES (out of 98 students)					
	Frequently Used	Not Frequently Used	Most Effective	Least Effective	Enjoy Least	Enjoy Most
Past Papers	32	50	37	6	11	24
Taking Notes from the Teacher	44	45	39	4	11	29
Individual/Desk Work	40	45	27	10	19	25
Audiotape	10	53	8	9	12	14
DVD – film/movie/multi-media projector	20	51	17	8	4	29
Reading from the textbook	42	42	27	10	20	23

Examination of the data shows that whereas most students responded to whether each strategy was frequently/not frequently used, there was a high proportion of non-response to whether the methods were effective or enjoyable. This is shown in table 24. The difference in the sum of the combined columns (most effective/least effective, and, enjoy least/enjoy most) and the number of students (98) indicates the rate of non-response to these items. Nevertheless, it is clear that as discussed earlier in Chapter 2, much of the teaching strategies used by teachers at MSS are teacher-directed to include, teacher-talk, taking notes from the teacher, and reading from the text book which seem to be popular approaches. Strategies that require student participation to be integral appear to be less used, and similarly activities involving the use of technology. At the same time students seem to find the whole class discussion, taking notes from the teacher and past papers to be most effective. The likely connection here is that these can be directly traced back to outcomes on achievements tests. They also find whole class discussion, hands-on activities, group work and the use of computers most enjoyable.

Table 25: Secondary Students' Views of Assessment Strategies

Assessment Strategies	Frequently Used	Not Frequently Used	Most Effective	Least Effective	Enjoy Least	Enjoy Most
Homework/Assignment	49	44	32	8	17	26
Essay	26	59	28	14	25	13
Journaling	11	64	13	12	15	15
Multiple Choice Questions	40	52	30	6	38	11
End of Term Examination	44	49	40	3	14	30
Peer Reviewing	21	56	22	9	12	20

Assessment Strategies	Frequently Used	Not Frequently Used	Most Effective	Least Effective	Enjoy Least	Enjoy Most
Half-term tests	43	47	36	9	19	19
True/False Questions	25	60	28	13	10	34
Feedback from teacher	38	47	29	10	11	26
Fill-in-the Blank Questions	23	58	24	13	9	27
Portfolio	11	56	16	14	13	14
Matching Questions	17	57	19	15	12	22
Presentation Project	33	49	29	13	9	26
SBA	42	46	35	8	18	23
Scoring Rubrics	11	52	11	12	11	16

Table 25 is similar to the previous table 24 as there is some indication here of assessment for learning through formative strategies such as homework/assignment, the half-term tests, and feedback from teacher. The data is less clear about the forms these take, for example 59 students indicated that essays are not frequently used. Of course, the type of assessment used will be based on the nature of subjects, nonetheless, some amount of diversity or combination of paper-and-pencil and authentic assessment is expected in Secondary Schools. With respect to authentic assessment approaches there is a resounding negative response to methods such as journaling, portfolio, and peer reviewing. On the other hand, the SBA component of CSEC seems to be prolific as an assessment tool, with 35 students indicating that this was effective. Again, the connection might be the place that SBA holds in CSEC assessment and the importance of this for a final grade.

Students' Views of their Classroom Context

Table 26 shows that students are moderately positive about their classroom context and we expect that even when acquiescence response set bias is accounted for (that is students tending to agree more than disagree because they believe that is what is expected of them), the general trend of the responses are likely to remain the same. The responses seem to suggest that classes at MSS are generally

engaging and favourable towards students. It also seems that most students agree that there are behavioural issues that sometimes disrupt teaching and learning.

Table 26: Classroom Context

Characteristics of the Classroom Context	Agree	Disagree	Mean Score	Std. Deviation
Good atmosphere that makes me feel like I am a part of the class	69	24	2.99	.910
The classes fully covers what I expect to learn	58	34	2.70	.781
Teachers are usually able to manage discipline in the classroom	47	44	2.48	.947
Classes are interactive and enjoyable	57	36	2.66	.814
Teaching is varied and makes me interested in the lessons	64	27	2.85	.773
Teachers use different ways to manage student behaviour	66	24	3.00	.793
Difficult and I cannot cope	24	64	2.07	.920
Some students with behaviour problems should be removed from the school	46	48	2.60	1.148
Useful and will help me in the future	83	11	3.30	.814
Poor discipline sometimes interfere with teaching and learning	77	16	3.25	.917
Interesting and makes me want to learn	74	18	3.07	.768
Some students often disrupt the classes	71	16	3.18	.977
Some students cannot cope academically and should not be included in our classes.	37	51	2.39	.976
Confusing and Frustrating	50	41	2.58	.870
Students who have difficulty learning should remain in our classes and receive help there.	74	20	3.10	.995

However, while half of the students agree that the remedy is to remove disruptive students from the school, the other half believes that this is not the solution. Students are also concerned about students who are struggling academically and most seem to believe that they should remain in their current classes and receive help there.

Students' Feelings about their Experiences of Teaching and Assessment

Table 27 presents students' views of the dynamics at play in the teaching and learning process. The five point scale of, *very often (5), often (4), sometimes (3), seldom (2) and never (1)* has been amalgamated for ease of analysis into a three point scale. The response categories of *sometimes and often* have been merged, as well as, *seldom and never.*

The mean score on each item is a composite of students' views and identifies where on the scale each item is placed collectively. However, with standard deviations over one in most cases, these scores should be viewed with some caution. Notwithstanding this, the results are indicative of placement of each item on the scale. For example, with a mean score of 2.98 it appears that most students are of the view that teachers' interest in their progress occurs only *sometimes*. When combined with the other items on *teacher expectations*, it appears that most students are aware of their teachers' expectations for completing assignments, for retaining what was previously taught and therefore the need to revise and study, as well as, the expectation to work independently to find solutions to problems.

With respect to *teacher feedback,* most students are agreed that they sometimes get feedback which is positive and encouraging. The items that capture *student autonomy* and the constructivist practices in the classroom point to teachers as the focus of instruction and activity in the classroom with teachers directing what students should do, providing solutions to problems, and providing students with specified approaches for solving problems. This highlights the trend of teacher-centred approaches with minimal student autonomy and only few opportunities for students to discover their own methods and come up with their own solutions.

Table 27: Students' Experiences of Teaching and Learning

Categories of School Experiences	Very Often	Sometimes	Never/Seldom	Mean	Std. Deviation
My teachers are interested in my progress	37	48	7	2.98	1.058
Teachers give me problems to solve or investigate	18	52	20	2.26	1.259
Teachers' comments about my work are encouraging	27	52	12	2.66	1.147
Teachers expect me to remember things I learned in past lessons	49	38	4	3.32	.948
The activities I do are set by the teacher	33	54	5	2.87	1.040
My teachers frequently provide feedback on my work	23	58	8	2.63	1.081
Teachers feedback on work done is positive	28	54	10	2.68	1.109
I try to find solutions to problems in the lessons	31	53	5	2.97	.994
Teachers show the correct method for solving problems	36	42	9	2.92	1.183
Teachers insist that my activities are completed on time	41	45	6	3.08	1.061
I hardly get feedback on my work	4	45	42	1.38	1.200
Teachers expect me to find my own solution to problems in the lessons	10	69	14	2.20	1.038
Teachers feedback on my work is negative	3	47	41	1.43	1.087
I learn the teachers' method of solving problems in the lesson	20	63	9	2.61	1.089
I know what it takes to be successful in High school	51	36	2	3.37	.953
I have good study skills	27	57	7	2.82	1.039

Summary of Key Findings

1) Student engagement appears to be high with most students indicating involvement in a wide range of extra-curricular activities.
2) Students identified teacher-talk, taking notes from the teacher, reading from the textbook as the most popularly used teaching strategies. This aligns well with the previous finding of teacher-directed pedagogy. Additionally there is

indication of minimal student autonomy and constructivist practices in the classroom.

3) Whole class discussion, taking notes from teachers, past papers were identified as most effective teaching strategies.
4) Similarly, whole class discussion, hands-on-activities, group work and the use of computers appear to be the most enjoyable.
5) Formative assessment and feedback to students appear to be a main part of the assessment regime, although students indicate that feedback on their work is only positive and encouraging sometimes.
6) Except for the CSEC SBA, authentic assessment procedures appear to be used infrequently.
7) Most students appear to be moderately positive about their classroom context, including feeling a sense of belonging and agreeing that lessons are interactive, interesting and engaging.
8) While most students agree that there are behavioural issues which sometimes disrupt lessons, they are almost equally split on the solution that these students should be removed from the school.
9) Similarly, they believe that students struggling with school-work should be provided with help in their current classes instead of being pulled out.

CHAPTER 4: CLASSROOM OBSERVATIONS

Purpose of the Classroom Observation Study

The primary purpose of the classroom observation study was to gather baseline data on teacher pedagogical practices to inform the development of an effective in-service teacher training programme, and to determine the status of teaching and learning in Montserratian classrooms relative to the four key areas identified for in-service training. The current status of classroom practices has to be established to ensure that the training is aimed at improving those pedagogical practices which will enable teachers to improve student achievement and maximize the potential of every child.

Methodology

Naturalistic observation, also known as nonparticipant observation was conducted. The researchers who were unobtrusive observers in the classrooms, observed lessons being taught in Grades 1 – 6 (primary) and Grades 7 – 11 (secondary) in order to get a snapshot of pedagogical practices, classroom environment and instructional materials in use. The main focus however, was to gather baseline data on the four key areas identified by the MOE for improvement as listed below.

(a) the effective teaching of core subjects;
(b) differentiated teaching/learning;
(c) assessment of learning; and
(d) classroom management.

Classes were observed by an experienced observer who spent 45 minutes to 1 hour in a class. Teachers were observed teaching a lesson based on what was scheduled to be done on the timetable.

Sample Selection

Montserrat has 4 primary schools, two of which are government owned and there is one high school. A total of 15 classes were observed from Grade K to Grade 6 at the primary level. As seen in Table 26 all grades at Brades Primary were observed; Grades K, 1, 3 and 5 at Look Out Primary; Grades 2 and 4 at St. Augustine Roman Catholic and two multigrade classes at The Lighthouse Academy. The15 classes visited represent 65% of the 23 classes in primary schools in Montserrat.

At Look Out and St. Augustine, classes were selected purposively with the assistance of the Education Officer who provided a profile of the teachers. Based on the information provided, teachers to be observed were selected based on a classification of strong or weak. The researcher also chose several classes randomly.

A total of 8 classes were observed at Montserrat Secondary School to include two Grade 7; one Grade 2; one Grade 8; one Grade 9; two Grade10 and two Grade 11. The observers randomly selected the classes from timetables provided. A total of 1 biology; 4 English and 3 math classes were observed.

Table 28: Selected Schools for Classroom Observations

School	School Type	Population	Grades Observed											
			K	1	2	3	4	5	6	7	8	9	10	11
Brades	Primary	160	✓	✓	✓	✓	✓	✓	✓					
Look Out	Primary	175	✓	✓		✓		✓						
St. Augustine	Primary	137			✓		✓							
Lighthouse	Primary	20	2 Multi-Grade classes with Grades 1 – 6 students											
Montserrat Secondary	High	350								✓✓	✓	✓	✓✓	✓✓
Total # of Classes Observed			**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**2**	**2**

Instrumentation for Classroom Observations

The Classroom Observation Checklist (Spencer-Ernandez & Edwards-Kerr, 2012) was developed to be used by unobtrusive observers in a classroom setting (See Appendix 1). In addition to the Checklist, detailed field notes were recorded during the period of observation

Section 1 of the checklist was designed to record demographic data such as name of school, grade, time of observation, number of students broken down by gender, date, subject being taught and the major topic or sub-topic of the lesson.

Section 2 of the observation instrument is a rating scale used to indicate the frequency of the occurrence of behaviours or characteristics grouped under the headings presented in Table 29.

Table 29: Classroom Observation Checklist

Characteristics – Subheading	Number of Items
Classroom Atmosphere	5
Teaching Strategies	24
Teacher-Student Interaction	8
Classroom Management	8
Total Number of Items	5

The observer had to determine whether the item being observed was observed "All of the Time", "Sometimes" or "Not Observed". There was an additional column for comments. In Section 3, there was an option to write additional notes, names of text books (if any) and materials used during the lesson.

Percentages were computed for each item that was rated. For example, if an item had 6 out of 10 checkmarks under "Observed all the Time", 2 under "Observed" and

2 under "Not Observed", then it would be rated as being observed 60% all of the time, 20% some of the time and 20% not observed.

Findings of the Observations

The findings are reported in this section. Demographic data will be presented first followed by an analysis of the ratings obtained under each item in the sub-categories.

The Primary School Story

Class Size and Student-Teacher Ratio

Class size ranged from a low of 17 to a high of 28. At the Lighthouse School there were two multi-grade classes with 10 students each. The average pupil-teacher ratio was 23:1 which is good for educational effectiveness and classroom management. The majority of research conducted on the effectiveness of class size; Finn and Achilles (1999), Konstantopoulos (2009), and Schanzenbach (2007), has found that smaller class size improves student achievement. Krueger and Whitmore (2001) reported additional small class size benefits for at-risk students to include; the narrowing of the achievement gap, reduction in grade retention, decrease in behavioural problems, reduction in truancy, and increased graduation rates.

Classroom Atmosphere

Table 30 shows the result of the ratings for Classroom Atmosphere. In most classrooms (67%), the seating was arranged to encourage cooperative learning and interaction. Visual aids to reinforce literacy and numeracy concepts were prevalent in most classrooms and a print rich environment was evident as well stocked classroom libraries were observed in each.

In a school visited, one teacher stood out as an exception to the rule as her classroom walls were bare and uninspiring. The Principal indicated that she had been spoken to on numerous occasions but remained non compliant. Her

classroom was also one of the 25% observed to not have a cooperative seating arrangement. Another teacher had her Grade 3 classroom furniture placed in lecture style with a passage down the middle with boys on one side and girls on the other. There was a high incidence of behavioural problems in this classroom, especially among the boys.

Table 30: Classroom Atmosphere – Primary Schools

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Seating is arranged for cooperative learning and interaction.	67%	8%	25%
Visual aids, literacy/math posters are displayed on the walls.	68%	12.5%	18.75%
Students' work is prominently displayed.	1%	_	99%
Students are allowed to talk to each other	67%	33%	_
Good interaction between teacher and students	33%	67%	_

Whereas teachers tended to have posters and other forms of visual aids, students' work was usually not displayed. The displays were predominantly teacher centred. Only one of the 14 classes observed had students work prominently displayed. Displaying student work is important for communicating with parents, and for helping students feel valued. Students in classrooms where their work is displayed feel a sense of pride and accomplishment and this contributes to the level of motivation and success.

It was observed that in most classrooms (67%) that students were allowed to talk to each other as they sat in their groups. The classrooms that did not facilitate this type of student interaction were usually those that did not have a cooperative seating arrangement.

Good interaction between teacher and student is a pre-requisite for building trust and a caring and supporting environment. The observers found that only 33% of the classes frequently demonstrated characteristics of good teacher and student interaction. In these classes the relationship between teachers and students appeared to be excellent with both students and teachers appearing to be comfortable and contented in a caring environment.

A Grade 6 teacher observed at Brades Primary demonstrated outstanding rapport with her students as she had ongoing discussions with them, asking questions, listening and offering advice. Her students were extremely responsive as she continuously engaged them in meaningful discussions. Two-thirds of the teachers observed demonstrated good interaction some of the times indicating that they were inconsistent in their attempt to foster good interaction with their students. Some appeared detached and appeared to be simply going through the motions.

Teaching Strategies

Table 31 presents the twenty-four items which were observed under this category. On the issue of lesson planning, most teachers (63%) presented lessons that appeared to have been planned, structured and coherent. A good practice of writing the objective for the lesson on the board, and discussing it with the students was observed at St. Augustine during a Language Arts lesson in Grade 2. Only a few teachers (25%) presented lessons that appeared haphazard and lacking in focus. Learning goals for the majority were clear.

Table 31: Teaching Strategies

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Lesson appears to have been planned- structured and coherent	62.5%	12.5%	25%
Learning goals clear	62.5%	12.5%	25%
Teaching strategies/activities are appropriate for the lesson.	57%	14.2%	28.5%
Activities are interactive and hands-on.	45%	18%	36%
Teacher uses technology in the lesson (e.g. AV/DVD, Tapes, PPT, Multi-media Projector)	_	_	100%
Students use the computer/language lab.	_	_	100%
Teacher uses a variety of teaching strategies to accommodate different learning styles.	_	22%	78%
Teacher varies the pace of instruction to reach students of all ability levels.	18%	9%	72.7%
Students work in groups	22%		78%
Teacher allows students to explore similar/advanced themes linked to the topic.	42.8%	11%	42.8%
Students get a chance to 'try out' problems.	16.6%	33%	50%
Teacher applies the lesson to 'real world' situations.	25%	25%	50%
Instruction is varied to accommodate different learning styles.	11%	33%	56%
Teacher Provides instructional support to students needing assistance.	25%	50%	25%
Focus of the lesson & activities appear to be aligned.	83%	17%	_
Teacher uses a variety of instructional materials.	_	43%	57%
Assessment procedures and activities are clearly outlined in lesson plan and are appropriate.	_	_	_
Appropriate degree of challenge.	40%	40%	10%
The teaching method(s) is/are appropriate for the content of the lesson.	40%	60%	_

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Students are participating in the lesson (raising hands, responding to the teacher's questions, asking questions)	70%	30%	_
Teacher makes effort to differentiate instruction	20%	_	80%
Differentiated work matches students' needs.	20%	_	80%
Differentiation evident in content, process and/or product.	20%	_	80%

As the lessons progressed, it frequently became evident that the primary method of delivery was a teacher centred "chalk and talk" approach. The activities were sometimes not a good match with the objectives of the lesson and they were predominantly pencil and paper with little attempt being made to use a hands or an interactive approach. At no time in the 14 classes did the observers see any teacher attempt to integrate in the lesson, the use of technology such as a multi-media projector, DVD player, tape recorder or computer.

The vast majority of teachers (78%) failed to meet the needs of all children through the use of a variety of teaching strategies to accommodate different learning styles. The pace was rarely varied (18%) to reach students of all ability levels. The modus operandi was primarily "one size fits all". Further supporting evidence of this trend was observed as only 11% of teachers varied instruction to accommodate different learning styles, and 25% provided instructional support to students needing assistance. Additionally, 20% of the teachers made an effort to differentiate. One teacher was observed to deliberately work with children of all ability levels. Her lesson was highly structured and there were accommodations planned and executed for all learners. Differentiation was evident during the teaching process and the end product expected of the children, as each group of learners had activities at their level of functioning which was presented once the whole class instruction had ended. Interestingly, there was no incidence of behavioural

problems despite the fact that the teacher was moving about the room while interacting with each group.

Due to the fact that most lessons observed were teacher centred, students were not given the opportunity to "try out" problems or to apply lessons to "real" world situations. This was observed only 25% of the time. Young primary aged children were often taking notes or copying from the chalkboard. Most teachers failed to use a variety of instructional materials as no teacher was observed doing this all of the time. Forty-three percent were doing it sometimes and for 57% of the teachers, this was not observed. On the matter of assessment of learning, this was an area of deficit as only 14% of the teachers were engaged in ongoing assessment.

The results showed that students were eager to learn as they participated enthusiastically in lessons, raising hands and responding to their teacher's questions and asking questions. This was observed in 70% of the classes visited, indicating that the students were ready to be engaged and wanted to be active participants in the process.

Teacher-Student Interaction

During the teaching of the lessons, teacher-student interaction was observed. The use of grade level talk was an area of strength as this was observed 75% (See Table 32) of the time. Teachers were usually good at relating to the students in a language they could understand. In most classrooms students were observed to be expressing their own views of the lesson and the teachers tended to listen and respond to them. For the most part however, teachers did not make use of the suggestions proposed by the students.

Table 32: Teacher Student Interaction

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Teacher checks on and assists students who appear to be confused or have fallen behind	_	75%	25%
Teacher uses grade / age level talk	75%	25%	_
Students express their own view of the lesson	60%	_	40%
Teacher provides support to students with special needs.	_	_	100%
Teacher questions, listens and responds to students.	62.5%	27.5%	_
Students are participating in the lesson (raising hands, responding to the teacher's questions, asking questions.)	62.5%	25%	12.5%
Students seek assistance from the teacher.	25%	75%	_
Teacher walks around the room and interacts with students.	17%	33%	50%

Very little effort was made by teachers to provide support for students who appeared to have special needs. They were largely ignored in an effort to move along with the lesson and the assigned activities. The provision of support to special needs students was not observed and students were not observed to be requesting assistance despite the fact that some were struggling. Only one teacher was observed to walk around the classroom, interacting with the children as they worked. In fact, she used the opportunity to get immediate feedback on their performance and to do direct one-on-one instruction. Fifty percent of the time this kind of interaction was not observed; 33% some of the time and 17% all of the time.

Classroom Management

Classroom management was an area of relative strength at the primary level. Class control was good in the vast majority of classes visited. As seen in Table 31, students were usually cooperative and no major disruptive behaviours were observed. If the need arose, most teachers were able to address the disruptive/problematic behaviours.

Table 33: Classroom Management

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Some students disrupt the lesson.	_	33%	67%
Teacher addresses disruptive/problematic behaviours	57%	43%	_
Students follow instruction the first time	16.7%	83%	
Teacher uses a variety of discipline strategies.	20%	60%	20%
Positive reinforcement of effort is evident.	37.5%	30%	37.5%
Appropriate behaviours are recognized and/or rewarded	20%	60%	20%
Teacher responds to students' inattentiveness, confusion, boredom, and curiosity.	28.5%	43%	28.5%
Some students appear distracted/hindering the lesson	_	57%	43%

Greater effort must be placed on the celebration of the students' successes. Twenty percent of the teachers saw it fit to offer positive reinforcement which was low especially in an environment where children are eager to learn. There needs to be an increased effort to use positive reinforcement which can be praise for work well done or for appropriate behaviours.

Lesson Observation

In this section, a critique will be presented on a selection of lessons taught during the observation period in Grades 1, 2 and 5 representing lower and upper school classrooms. They were selected to highlight some good and poor practices observed.

Two Grade 1 classes are presented in Table 34. For the first class, the topic was comprehension. The teacher presented a story web and then the students were required to write a story. The entire lesson and activity was teacher centred and there was not enough interaction between teacher and students and among students even though they were seated in a cooperative learning style model. The method of lesson delivery was teacher talk and chalkboard. The students were not given an opportunity to create a web or to participate in the design of the web presented by the teacher on the topic chosen by her. Students therefore, struggled with the writing of the story and most of them did not produce more than a line or two by the end of the class.

Table 34: Grade 1 Classes Observed

Topic	Grade	Materials Used during the lesson	Comments
Composition	1	Chalkboard/Chalk	• Rigid enforcement of teacher rules, students were not able to interact. • Teacher centred activity not enough interaction between teacher and students and among students • Classroom libraries present • Students were required to begin writing their story after teacher did a story web • No attempt made to differentiate instruction
Story Web- Written Language	1	Flash cards, sentence strips Story books	• Classroom library evident • Reading words from story- Goldilocks- identifying similar words from the story and another text.

Topic	Grade	Materials Used during the lesson	Comments
			• writing activity done in groups. • Teacher's aide assisted teacher by going over words with "weaker" groups. • Excellent student behaviour - teacher provided reinforcement (praise for effort and correct response) in the slower group • Teachers were encouraging • Spelling was integrated in the lesson.

The teacher of the second Grade 1 class was also working on developing written language skills using a story web. The lesson was highly interactive and differentiated instruction was evident throughout. A teacher's aide was in the class and much attention was given to students who were struggling with the content, process and product. Both teachers worked very well and rotated the groups of students they were monitoring. One major success was the writing of the story in groups. The students shared ideas with each other in a mature manner and were spelling words and editing the story as the writer wrote. The groups were well managed by a leader and the overall behaviour was excellent. The use of the web to create their own stories was outstanding for Grade 1 students.

The first Grade 2 class presented in Table 34 was engaged in story writing activities. The classroom was print rich and teaching aids for Language Arts, Mathematics, Social Studies and Science were prominently displayed. Although the classroom was small, furniture was arranged in cooperative grouping with each group having a name which, according to the teacher, they chose. Excellent teaching-learning strategies were observed as the teacher executed a well thought out and delivered plan to develop story writing skills. Mixed ability groups were evident and there was a high level of interaction among students and between teacher and students. As they read the story composed by the group, their work was celebrated by the teacher and students alike.

The teacher provided 1-1 assistance for those students she knew were struggling with the tasks. This was well received by the students who kept beckoning to her to sit with them. She usually complied. The pictures used as prompts to stimulate discussion and ideas for writing were well used and the sharing of the stories by each group to include a critique, were examples of best practices in the teaching of Language Arts.

Table 35: Grade 2 Classrooms Observed

Topic	Grade	Materials Used during the lesson	Comments
Story Writing	2	Pictures - writing prompts, flash cards	• Students were organized in mixed ability groups – each had a name • High level of participation during lesson and while completing their individual piece. • Teaching aids were all over the room • Teacher made students share orally what they wrote. • Children appeared tall for their age and grade • Teacher sat for the most part as they wrote. • Written product was good as stories were well structured and the vocabulary used was advanced. • Flexible grouping practiced • Teacher made an effort to work with 'slower' students in groups on a 1-1 basis.
Review of Math Test	2		• Classroom library was evident • Some students were distracted and were walking and talking out of turn – poor classroom management by teacher • Rewards of girls' performance as a token was offered but none was offered to boys • Number lines were used on the board to solve problems • Too much confusion in the lesson • Teacher failed to acknowledge some students despite their "begging" to be heard or seen • Lecture style classroom layout with boys on one side and girls on the other. • Students were frequently otherwise engaged and teacher made little or no attempt to engage them in the lesson. • Walls were bare

The teacher in the second scenario was ill prepared and in fact complained to the principal about the observers being in her class. She eventually presented the students with a past test paper which she reviewed with them. The students were for the most part disengaged from the process, appeared uninterested and displayed inappropriate behaviours as they were frequently out of their seat and speaking out of turn. Despite the presence of the observer, some students were huddling together and having their own conversation which had nothing to do with the lesson. The teacher continued with her lesson as if they were not a part of the class.

Table 35 shows the observations made in a Grade 5 class. This young teacher was passionate about her work and had obviously planned well for the lesson. Students were seated in cooperative groups and could freely communicate and share with each other. Effective cooperative learning occurs when students work together to accomplish shared goals and when positive structures are in place to support that process (Johnson & Johnson, 1999). Behaviour management was excellent and the teacher was able to get every student engaged in the lesson. Story books were used for practical application of the lesson. Students had to find the "confusing" words in stories and indicate the meaning as used in the context. Then they had to use them in sentences and those students who were struggling with the concept were assisted by the teacher. Positive reinforcement was frequently used via verbal praise for work and behaviour. The children relished the attention.

Table 36: Grade 5 Class Observed

Topic	Grade	Materials Used During the Lesson
Using Confusing Words (To, Too, Two)	5	Laptop, Chalkboard, story books

Comments

- 23 students in a small space -some students used teacher's desk
- Students were cooperative well behaved, focused.
- Lesson was highly structured
- Teacher used Laptop where her examples were stored
- Teacher identified students who didn't respond and managed to get them involved.
- Teacher wrote on the board when students couldn't respond orally and used different methods to involve all students and to ensure that they understood the concept being taught.
- Reinforcement (verbal praise) was given to each group
- Students were questioned about the content
- The Teacher commented on students responses to provide instant feedback and gave students a chance to correct themselves where a previous response was incorrect.
- Different learning styles and abilities were accommodated.

The High School Story

Class Size and Student-Teacher Ratio

Class size ranged from a low of 15 to a high of 22 with the average being 17 students to one teacher. (17:1) which, like the primary schools, is a good foundation for educational effectiveness an classroom management.

Classroom Atmosphere

Table 37 shows the result of the ratings for Classroom Atmosphere. At the high school level the class seating arrangement tended to be lecture style. Fifty percent of the time cooperative learning style of furniture arrangement was not evident. Visual aids for the class being observed such as mathematics or English, were for the most part not observed (60%). The display of students' work was not a feature of the classrooms despite the fact that it is well documented that displaying students' work is one of the effective ways in raising the students' motivation in learning. Good interaction between teacher and student was observed in some classes.

Table 37: Classroom Atmosphere – High School

Characteristics	Observed All of the time	Observed Sometimes	Not Observed
Seating is arranged for cooperative learning and interaction.	25%	25%	50%
Visual aids, literacy/math posters are displayed on the walls.	_	40%	60%
Students' work is prominently displayed.	_	_	100%
Students are allowed to talk to each other	_	_	100%
Good interaction between teacher and students	_	100%	_

Teaching Strategies

Table 38 presents the twenty-four items which were observed under this category. One biology, three mathematics and 4 English classes were observed. Fifty percent of the teachers presented lessons that appear to have been planned, highly structured and coherent. There was a noticeable absence of the use of technology during the lessons and the activities were largely "pencil and paper" and "chalk and talk".

There were several items that addressed the matter of learning styles, learning differences and differentiated instruction. It was evident that this was an area of deficit. Most teachers were not prepared to meet the needs of all students. Their lessons were usually either subject or teacher centred. There was little or no evidence of different learning styles being accommodated, group work being done or teacher making the effort to differentiate instruction by content, process or product. For example, approximately 72% of the teachers observed made no attempt to use a variety of teaching strategies to accommodate different learning styles and 67% did not make an effort to differentiate instruction or differentiate work to match students' needs.

Table 38: Teaching Strategies

Characteristics	Observed All the Time	Observed Sometimes	Not Observed
Lesson appears to have been planned-structured and coherent	50%	25%	25%
Learning goals clear	50%	17%	33%
Teaching strategies/activities are appropriate for the lesson.	60%	_	40%
Activities are interactive and hands-on.	40%	_	60%
Teacher uses technology in the lesson (e.g. AV/DVD, Tapes, PPT, Multi-media Projector)	25%	_	75%

Characteristics	Observed All the Time	Observed Sometimes	Not Observed
Teacher uses a variety of teaching strategies to accommodate different learning styles.	28.5%	_	71.5%
Teacher varies the pace of instruction to reach students of all ability levels.	33%	_	67%
Students work in groups	_	_	100%
Teacher allows students to explore similar/advanced themes linked to the topic.	_	_	100%
Students get a chance to 'try out' problems.	40%	_	60%
Teacher applies the lesson to 'real world' situations.	_	_	100%
Instruction is varied to accommodate different learning styles.	40%	_	60%
Teacher Provides instructional support to students needing assistance.	50%	_	50%
Focus of the lesson & activities appear to be aligned.	67%	33%	_
Teacher uses a variety of instructional materials.	40%	_	60%
Assessment procedures and activities are clearly outlined in lesson plan and are appropriate.	_	_	_
Appropriate degree of challenge.	75%	_	25%
The teaching method(s) is/are appropriate for the content of the lesson.	50%	50%	_
Evidence of ongoing assessment.	50%	_	50%
Students are participating in the lesson (raising hands, responding to the teacher's questions, asking questions)	100%	_	_
Teacher makes effort to differentiate instruction	33%	_	67%
Differentiated work matches students' needs.	33%	_	67%
Differentiation evident in content, process and/or product.	33%	_	67%

The lessons were so overwhelmingly teacher and subject centred that students were rarely given an opportunity to discuss topics or to voice an opinion. Teachers

failed to apply lessons to "real world" situations and some teachers used a variety of teaching materials. Similarly, students were not given the opportunity to "try out" problems. Teachers demonstrated strengths in the areas of the alignment between the focus of the lesson and activities, the level of challenge and student participation in the lessons.

Teacher-Student Interaction

During the teaching of the lessons, teacher-student interaction was observed. The use of grade level talk was an area of strength as this was observed 75% (See Table 38) of the time. Teachers were usually good at relating to the students in a language they could understand. The difficulty, however, was that students for the most part, were not observed to be expressing their own views of the lesson. It tended to be a "do as I say" one way discourse. The teachers spoke and they listened passively or acted out disruptive behaviours.

Table 39: Teacher-Student Interaction

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Teacher checks on and assists students who appear to be confused or have fallen behind	50%	_	50%
Teacher uses grade / age level talk	80%	20%	_
Students express their own view of the lesson	_	_	100%
Teacher provides support to students with special needs.	50%	_	50%
Teacher questions, listens and responds to students.	100%	_	_
Students are participating in the lesson (raising hands, responding to the teacher's questions	100%	_	_
Students seek assistance from the teacher.	67%	_	33%
Teacher walks around the room and interacts with students.	100%	_	_

Fifty percent (50%) of the teachers provided some level of support for students with special needs. Though limited, it was better than what was observed at the primary level. This was primarily observed in the LEAP class where the teacher tended to walk around and offered assistance to some students who appeared to have reading difficulties. Other teachers observed did not appear to have a plan of action to assist special needs students.

When teachers were using direct questioning techniques, they listened to the students' responses and tended to give the students feedback. Student participation was good as they participated in the lessons observed by raising hands and responding to the teacher's questions. Sixty-seven percent sought assistance from the teacher but their cry for "help" was not always heard.

Classroom Management

There were mixed results in the area of classroom management. In the classes where some students disrupted lessons (43%), the teachers were kept busy addressing the disruptive behaviours and this affected the flow of the lesson, causing loss of instructional time. Some teachers (33%) were observed to be using a variety of disciplinary strategies and they were usually effective. Those who were inconsistent in the use of disciplinary strategies to manage student behaviours experienced difficulty in maintaining order. Despite the challenges, most teachers (60%) used positive reinforcement for effort related to class work which was largely successful. They did not however, apply this same strategy to reward appropriate behaviours. Students whose behaviours were out of control were able to disrupt classes, thus interfering with the progress of other children.

Table 40: Classroom Management

Characteristics	Observed All of the Time	Observed Sometimes	Not Observed
Some students disrupt the lesson.	43%	_	57%
Teacher addresses disruptive/problematic behaviours	67%	_	33%
Students follow instruction the first time	33%	_	67%
Teacher uses a variety of discipline strategies.	33%	67%	_
Positive reinforcement of effort is evident.	60%	_	40%
Appropriate behaviours are recognized and/or rewarded	_	_	100%
Teacher responds to students' inattentiveness, confusion, boredom, and curiosity.	100%	_	_
Some students appear distracted/hindering the lesson	100%	_	_

Lesson Observations

Table 41 presents Class 1 which is a Grade 7 class where English Language was being taught and Class 2 where a Grade 9 mathematics lesson was in progress. The Grade 7 teacher was challenged by the group and lost control early in the lesson. The focus was shifted from the lesson to addressing basic behavioural problems and the issue of students not taking books to class. Additionally, the teacher spent a lot of time interacting with the boys in the front of the class while the others in the back were restless and talkative. They were basically ignored and there were no consequences for their inappropriate behaviours. Very little teaching and learning took place and by the time the session came to an end, the teacher was still dealing with behavioural issues.

Table 41: Grades 7 and 9 Lesson Observation

Name of Text Used/ Class	Topic	Grade	Materials Used during the lesson	Comments
Class 1 Text: English for Life	Language Structures	7	Text book	• Teacher spent more time on addressing basic behavioural problems than on the lesson. • The teacher focused on interacting with the boys at the front of the class while the students at the back were restless and talkative. • Teacher addressed issues related to students taking books to class. • Class was disruptive and not conducive for learning • Teacher was not in control.
Class 2 Text: Key Maths	Mathematics : Straight Lines	9	Ruler, Graph paper	• Teacher starts the lesson with a game by placing students in groups as a part of the lesson • Students were attentive to the process of solving the problems taught in the lesson. • Teacher sits between the students and shows them the process of solving the problems. • Teacher uses the stronger student to help the students who are behind in understanding the concepts. • Teacher penalizes students who didn't complete the assignment with detention.

The teacher of Class 2 was teaching mathematics using a very interactive, hands on approach. Students were placed in groups based on mixed ability. He then used the stronger students in the group to assist those students who were struggling with the concept being taught and this was highly successful. The majority of students was attentive and was very involved in the lesson. The teacher sat with

each group and ensured that the concept was understood and encouraged all to give of his/her best. He was in control of the class and students who did not complete the assignment due to poor work attitude or lack of cooperation faced the consequence of a detention.

Summary of Key Findings

1. Observations made in the primary schools indicated that class size was a major positive which was on the average 1 teacher to 23 students. The high school had an excellent ratio of 1:17.

2. In most classrooms the seating was arranged to encourage cooperative learning and interaction at the primary level. This was not observed at the high school level as the layout was largely lecture style.

3. Visual aids to reinforce literacy and numeracy concepts were prevalent in most classrooms and a print rich environment was evident as well stocked classroom libraries were observed in each primary classroom. There was little or no evidence of this in the high school classrooms.

4. At both levels, students' work was usually not displayed. The displays in the primary classrooms were predominantly teacher centred.

5. The observers found that only 33% of the classes frequently demonstrated characteristics of good teacher and student interaction.

6. Lessons appeared to have been planned, structured and coherent and for the majority learning goals were clear.

7. The primary method of lesson delivery in both the primary and high schools was a teacher centred "chalk and talk" approach. The activities were

sometimes not a good match with the objectives of the lesson and they were predominantly pencil and paper with little attempt being made to use a hands, technology or an interactive approach.

8. The vast majority of teachers failed to meet the needs of all children through the use of a variety of teaching strategies to accommodate different learning styles. The pace was rarely varied to reach students of all ability levels. The modus operandi was primarily "one size fits all".

9. Assessment of learning was an area of deficit as few teachers were observed to be engaged in ongoing assessment.

10. The use of grade level talk was an area of strength. Teachers were usually good at relating to the students in a language they could understand at the primary level.

11. Very little effort was made by teachers to provide support for students who appeared to have special needs. They were largely ignored in an effort to move on.

12. The lessons were overwhelmingly teacher and/or subject centred.

CHAPTER 5: ANALYSIS OF STUDENT PERFORMANCE ON NATIONAL AND REGIONAL ASSESSMENTS

This chapter will focus on the performance of students on national and regional examinations. At the primary level, analysis of students' performance on the Grades 3 and 5 National Tests of Standards in English and Mathematics for 2010 and 2011 will be presented. This is the data that is currently available. At the secondary level, performance on the CSEC examination in English A, Mathematics, Biology, and Information Technology will be analysed.

Performance at the Primary Level

Each year the Ministry of Education administers the National Test of Standards to Grades 2 and 5 students in English and Mathematics which is curriculum based. In addition to assessing student performance against curriculum standards, the results are used to set attainment targets for each school. The data shown in Figure 1 is for St. Augustine Roman Catholic and Brades and Look Out Primary Schools. Since The Lighthouse Academy is new, there is no available data on the schools' performance on national tests. SCA was dropped from the data set as it no longer exists.

Performance in English

The scores presented in Figure 1 for each school, represents the percentage of students who are performing at or above the national mean. The national mean is also presented.

At the Grades 3 and 5 levels, St. Augustine, which is a government assisted private school, consistently has the majority of its students performing well

above the national average. This was so for both their male and female students. Brades Grade 3 females performed well on the Grade 3 test with 62% scoring above the national average of 58%. For the Grade three 2011 administration, the males outperformed the females as 33% were at the national average of 33% compared to 22%. At the Grade 5 level, Brades females were above the national mean for both years under review. The males on the other hand, performed well below the mean in 2010 as only 9% were at or above the mean, and in 2011, 50% were at or above the mean of 68%.

The Look Out Primary School had both females and males performing below the national average in 2010 and 2011. The males in particular were consistently below as in Grade 3, only17% and 18% were at or above the national average for 2010 and 2011 respectively. In Grade 5 the picture was pretty much the same with no male student performing at or above the national mean which was 17%. The gender gap was evident in all three schools, but was more prevalent in Brades and Look Out Primary Schools.

Figure 1: Grade 3 National Test of Standards in English

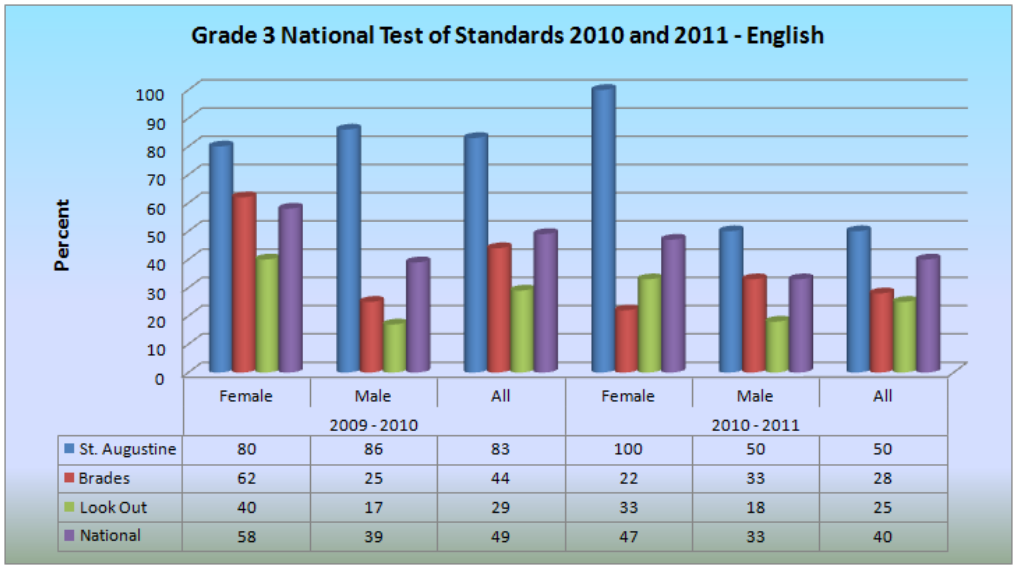
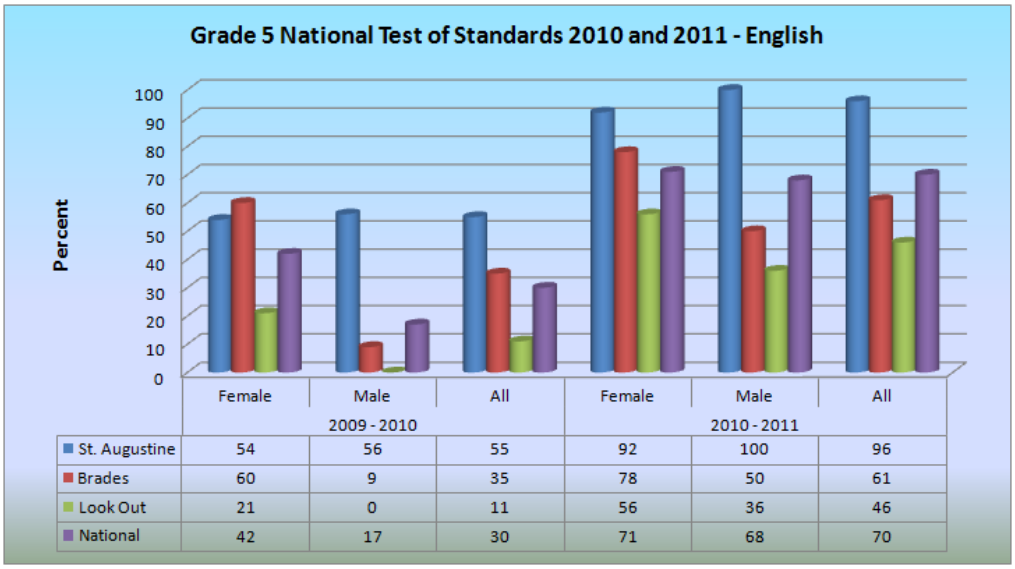


Figure 2: Grade 5 National Test of Standards in English



	Female	Male	All	Female	Male	All
	2009 - 2010			2010 - 2011		
St. Augustine	54	56	55	92	100	96
Brades	60	9	35	78	50	61
Look Out	21	0	11	56	36	46
National	42	17	30	71	68	70

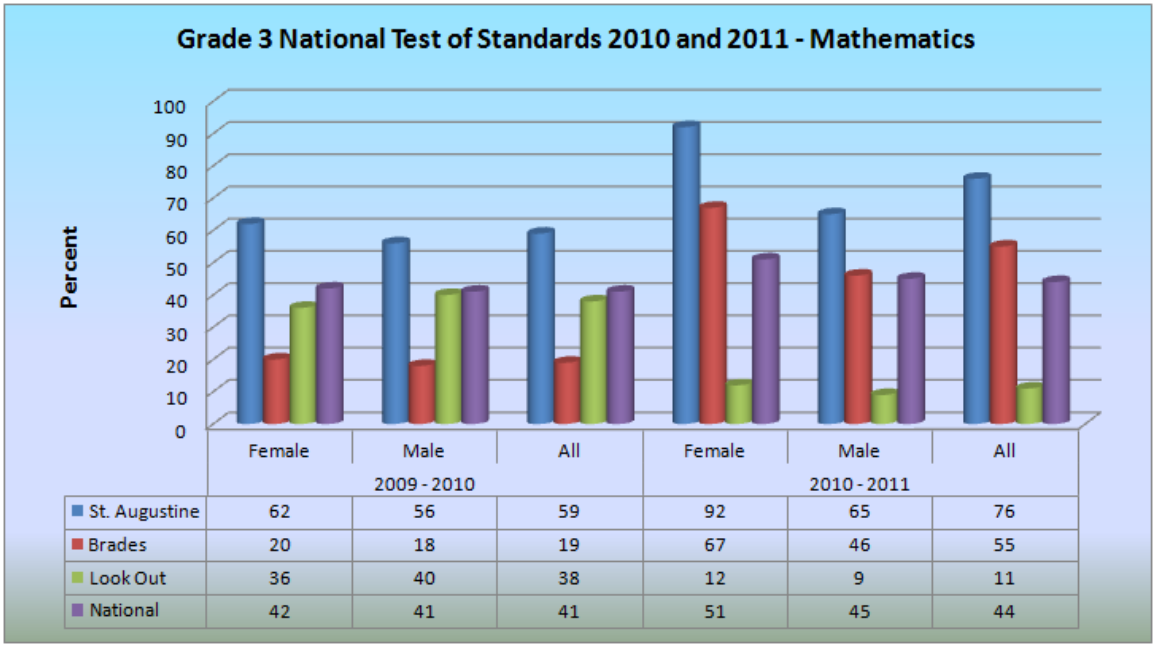
Performance in Mathematics

Fifty-nine percent of the students at St. Augustine obtained scores which placed them at or above the national mean of 41% in 2010. Both females and males were above the national mean. Girls however, had a higher percentage above the mean with 62% compared to boys at 56%.

Nineteen percent of the students at Brades were at or above the national mean (Figure 3). A significant number (81%) fell below the average. The performance across genders was similar. Look Out Primary had 38% at or above the mean of 41% but for the 2011 sitting this fell to 11% above the national mean of 44%.

Mathematics appeared to be an area of deficit for most students in Grade 3.

Figure 3: Grade 3 National Test of Standards in Mathematics



	Female	Male	All	Female	Male	All
	2009 - 2010			2010 - 2011		
St. Augustine	62	56	59	92	65	76
Brades	20	18	19	67	46	55
Look Out	36	40	38	12	9	11
National	42	41	41	51	45	44

Figure 4 shows the performance of students on the Grade 5 Mathematics test.

For the year 2011, most of St. Augustine's Grade 5 male students performed above the national mean with 71% obtaining scores at or above the national mean for males of 39%. The female students were below the national mean as only 50% performed at or above the national female mean of 61%. The vast majority of students at Brades and Look Out schools were functioning below the national average. Most females (75%) at Look Out Primary were however, above the national mean for girls at (61%). The overall performance in 2011 declined for all schools with the exception of St. Augustine where all female students performed above the national mean of 50% and males were at 60%. Look Out Primary fell from 48% in 2010 to 40% of their students being at or above the national mean in 2011. At Brades both males and females appeared to be "at risk" for failure in mathematics as in 2011, 67% of female students and 60% of male students were below the national mean.

Figure 4: Grade 5 National Test of Standards in Mathematics

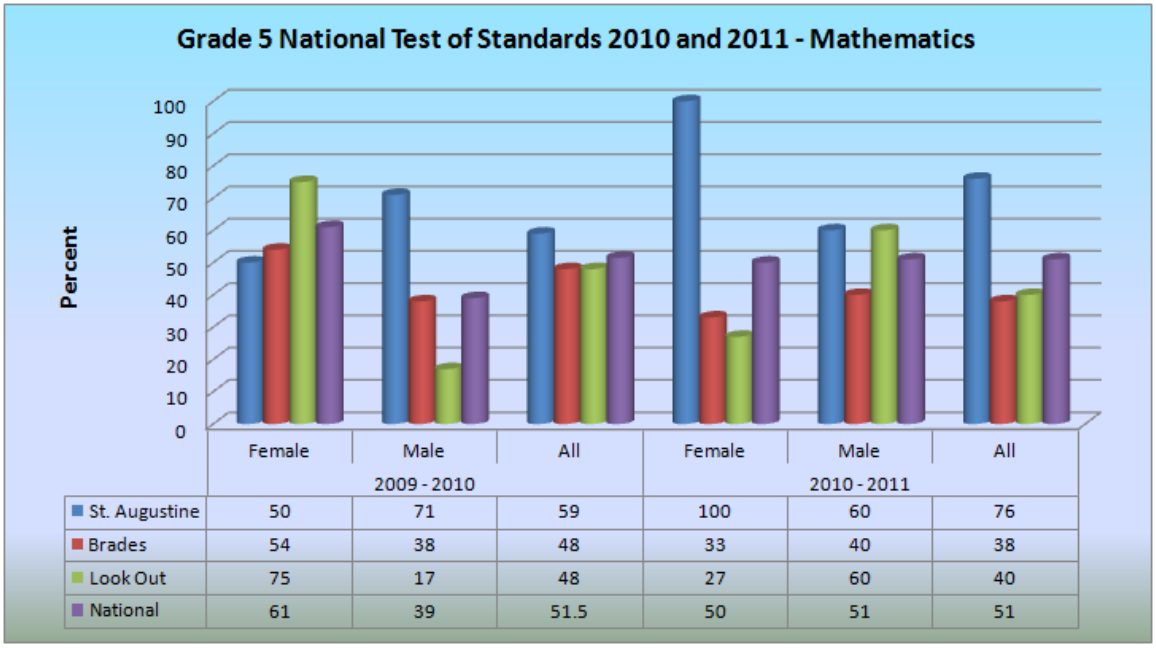


Table 42: National Test Data Projections 2010 – 2011

School	2010-11 Actuals							
	G3				G5			
	Male		Female		Male		Female	
	En	Ma	En	Ma	En	Ma	En	Ma
St Augustine	50	60	100	100	100	71	92	92
Brades	33	40	33	27	50	50	78	67
LOPS	18	60	33	27	36	9	56	12
Nat Ave	33	51	47	45	68	48	71	51

Key: Numbers in red indicate targets that have not been met and numbers in green represent those that have been met.

The Ministry of Education, each year, uses the schools' data to set targets for each school. Table 41 shows how the students performed in relation to the target set. In 2011 St. Augustine failed to meet its target for male students in English and Mathematics for Grade 3. The overall national target set for male students in English was not achieved. Only St. Augustine met the target for

English and Mathematics in Grade 3. All other schools failed to meet the target and as a result, the national target was not met. The picture for Grade 5 was much more promising as 14 out of 16 targets were met. Look Out Primary males failed to meet the target in mathematics and their females failed to meet the Mathematics target.

Summary of Key Findings

1. The results of the National Test of Standards for Grades 3 and 5 indicate that the national mean for both mathematics and English is relatively low.
2. The majority of students in primary schools are performing below the national mean for Grades 3 and 5 on the National Tests of Standards.
3. There is a gender gap in performance which is largely in favour of females in mathematics and English as they tend to outperform males.
4. Students from St. Augustine consistently outperformed students from Brades and Look Out Primary in both mathematics and English.
5. Most of the targets set by the MOE for each school in mathematics and English for 2011 were met.

Performance on the Caribbean Secondary Examination Certificate (CSEC) Examination

To investigate the performance of students in CSEC, four subjects were selected to include; English A, Mathematics, Biology and Information Technology. Both English A and Mathematics are required subjects for matriculation to tertiary level education and for the job market and are therefore, vital for students to obtain. Biology was selected to represent the sciences and as Information Technology is an increasingly popular subject of choice by Caribbean students who wish to meet the demands of the age of technology, it was selected.

The percentage pass for each subject was calculated and disaggregated by gender. For each subject, six years of data collected from the MOE through the Caribbean Examination Council (CXC) beginning in 2006 and ending in 2011 is presented which shows the number of students sitting and passing the subject, the overall mean number of students sitting and passing and the standard deviation.

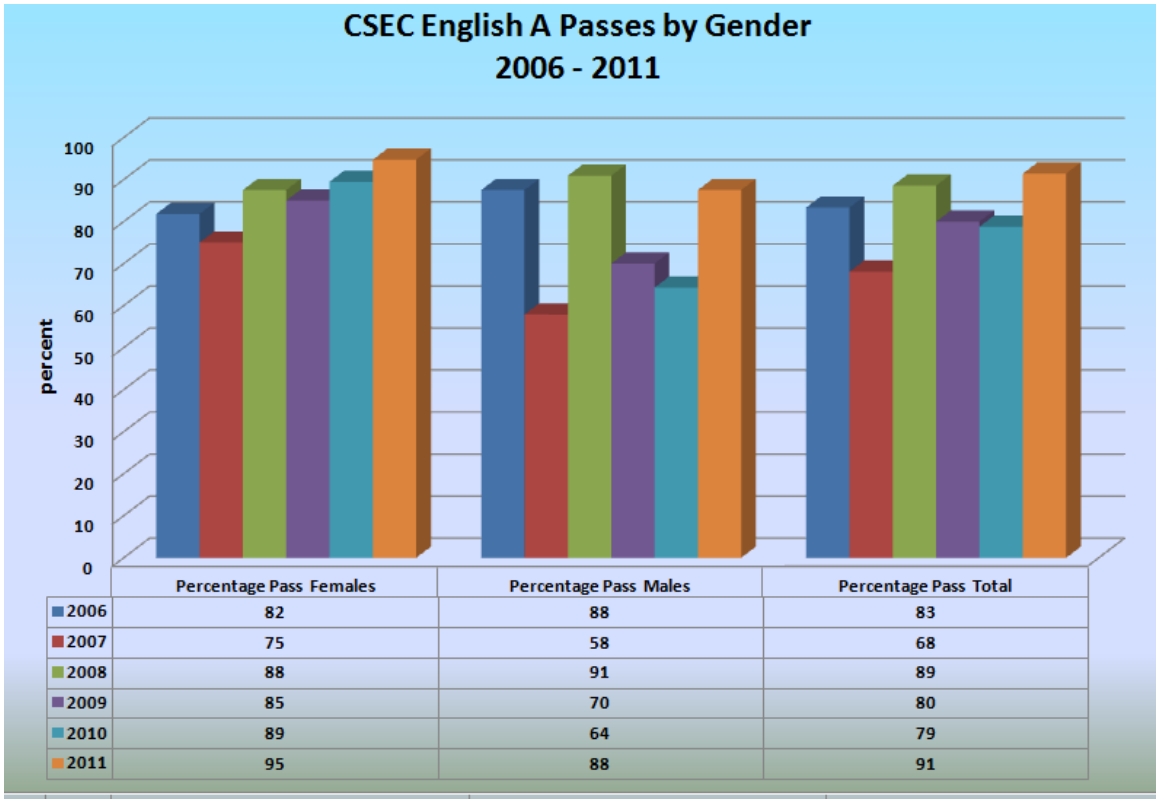
Performance on English A

Table 43: Performance in CSEC English A

Year	Females Sitting	Females Passing	Percent Passing	Males Sitting	Males Passing	Percent Passing	Total Sitting	Total Passing	Percent Passing
2006	22	18	82	8	7	88	30	25	83
2007	28	21	75	19	11	58	47	32	68
2008	24	21	88	11	10	91	35	31	89
2009	20	17	85	10	7	70	30	24	80
2010	19	17	89	14	9	64	33	26	79
2011	19	18	95	16	14	88	35	32	91
Mean	22	19	86	13	10	76	35	28	82
SD	3.52	1.86	6.77	4.10	2.66	14.05	6.29	3.72	8.26

The mean number of students sitting English A over the 6 year period was 35 representing approximately 50% of the cohort of students in Grade 11. The number sitting has been 30 – 35 for five of the six years with 2007 seeing a high of 47 sitting. The mean percent pass is 82%. If however, the percent pass is calculated using the cohort of Grade 11 students, it falls to 40%. Further disaggregation by gender reveals that females outperformed males as their average percent passing is 86 compared to 76 for males. They also outnumber the males in the number of students sitting (mean number of females sitting = 22, mean number if males sitting = 13). There has been a steady decline in the number of females sitting the examination from 22 in 2006 to 19 in 2011. Boys on the other hand, have seen an increase of 100% sitting since 2006 as the moved from 8 sitting to 16 in 2011.

Figure 5: CSEC English A Passes by Gender



	Percentage Pass Females	Percentage Pass Males	Percentage Pass Total
2006	82	88	83
2007	75	58	68
2008	88	91	89
2009	85	70	80
2010	89	64	79
2011	95	88	91

Figure 5 shows that since 2009 there has been a steady increase in the number of girls passing CSEC English A. The performance for the boys have been erratic as in 2006, 2008 and 2011 the pass rate above 80% and in 2007, 2009 an 2010 the pass rate ranged from 58% to 70%.

Quality of Passes

Table 44: Grades Attained in Biology by Gender

	GRADES									
	I		II		III		IV		Other	
Year	F	M	F	M	F	M	F	M	F	M
2006	7	22	8	3	3	2	4	1	0	0
2007	6	0	7	2	8	9	7	8	0	0
2008	6	1	5	2	10	7	3	1	0	0
2009	7	3	5	3	5	1	3	3	0	0
2010	12	2	2	5	3	2	1	5	1	0
2011	6	3	8	7	4	4	1	2	0	0
Mean	7	5	6	4	6	4	3	3	0	0

Table 44 shows that with the exception of 2007 when the overall performance was at its worst with only 68% of those sitting passing. Most students sitting, received a Grade I or Grade II.

Performance in Mathematics

The mean number of students sitting Mathematics is 30 representing approximately 43% of the cohort of Grade 11 students. Based on the number sitting, the mean percent pass is 64, but based on the Grade 11 cohort, it would be 27%.

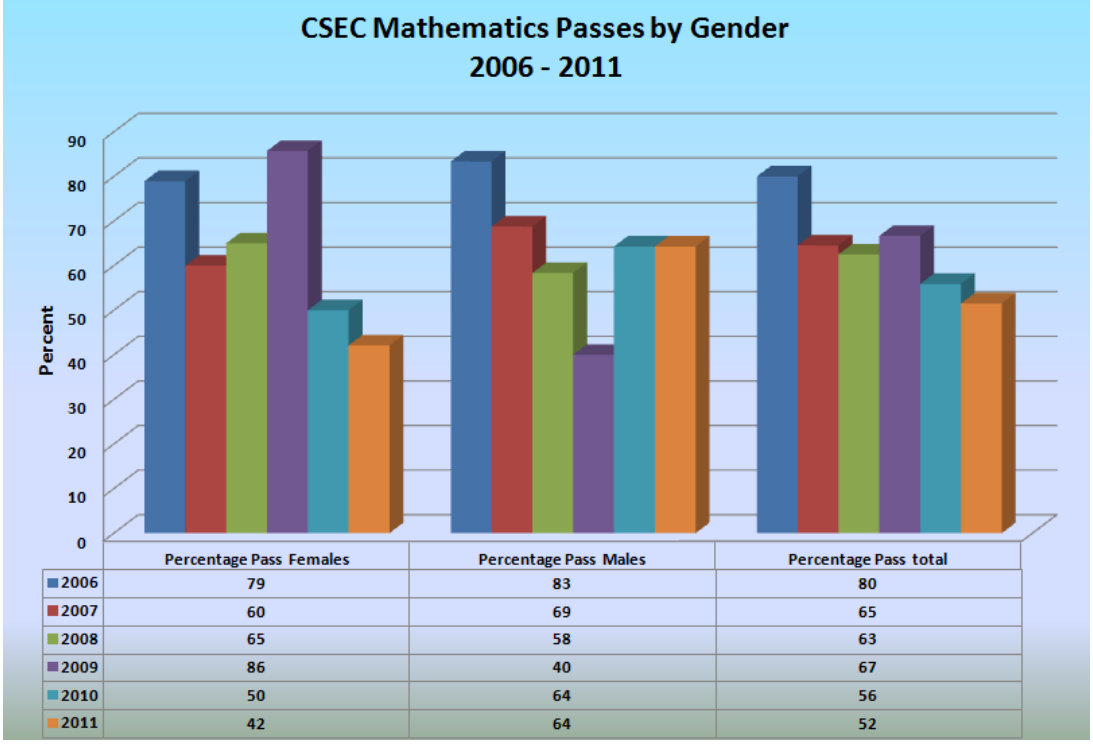
Disaggregation by gender reveals that more females sit Mathematics than males as the average number sitting is 18 for females and 12 for males. Only in 2007 did the boys outnumber the girls when 16 boys sat compared to 15 girls. The mean percent pass for females is 64 and for boys, 63.

Table 45: Performance in CSEC Mathematics

	Females Sitting	Females Passing	Percent Passing	Males Sitting	Males Passing	Percent Passing	Total Sitting	Total Passing	Percent Passing
2006	19	15	79	6	5	83	25		80
2007	15	9	60	16	11	69	31	20	65
2008	20	13	65	12	7	58	32	20	63
2009	14	12	86	10	4	40	24	16	67
2010	20	10	50	14	9	64	34	19	56
2011	19	8	42	14	9	64	33	17	52
Mean	18	11	64	12	8	63	30	19	64
SD	2.64	2.64	16.65	3.58	2.66	14.15	4.26	1.75	9.86

The trend in the pass rate as seen in Figure 6 indicate that for the last three years (2010 – 2012), there has been a decline in the percent of females passing the examination, moving from 86% to 42%. For that same period, there has been an increase in the percent passing for males, moving from 40% to 64%.

Figure 6: CSEC Mathematics Passes by Gender



	Percentage Pass Females	Percentage Pass Males	Percentage Pass total
2006	79	83	80
2007	60	69	65
2008	65	58	63
2009	86	40	67
2010	50	64	56
2011	42	64	52

Quality of Passes

Most students who sat mathematics and passed the subject got the minimum Grade III pass. Table 45 shows that the mean number of females getting a Grade I is 1 and this was less than 1 for males. The mean for a Grade II was 2 for both males and females. The mean for Grade III was 8 and 5 for females and males respectively. There was a higher proportion of females failing the subject than boys with a grade IV or "other".

Table 46: Grades Attained in Mathematics by Gender

	GRADES									
	I		II		III		IV		Other	
Year	F	M	F	M	F	M	F	M	F	M
2006	0	1	4	0	11	4	2	1	2	0
2007	2	0	1	0	6	11	5	3	1	2
2008	1	1	5	2	7	4	4	4	3	1
2009	1	0	2	4	9	0	2	0	2	0
2010	1	0	1	2	8	7	6	2	4	3
2011	1	0	1	5	6	4	4	3	7	2
Mean	1	0.33	2	2	8	5	4	2	3	1
SD	0.63	0.52	1.75	2.04	1.94	3.69	1.60	1.47	2.14	1.21

Performance in Biology

Biology was selected to represent the sciences in the review. With an annual Grade 11 cohort of about 70 students, the total number sitting each year is relatively low as the mean number of students sitting the subject over the 6 years is 9 representing 13% of the cohort. The year 2008 saw an increase to 13 students but then there was a steady decline the following years and by 2011 only 8 students sat biology.

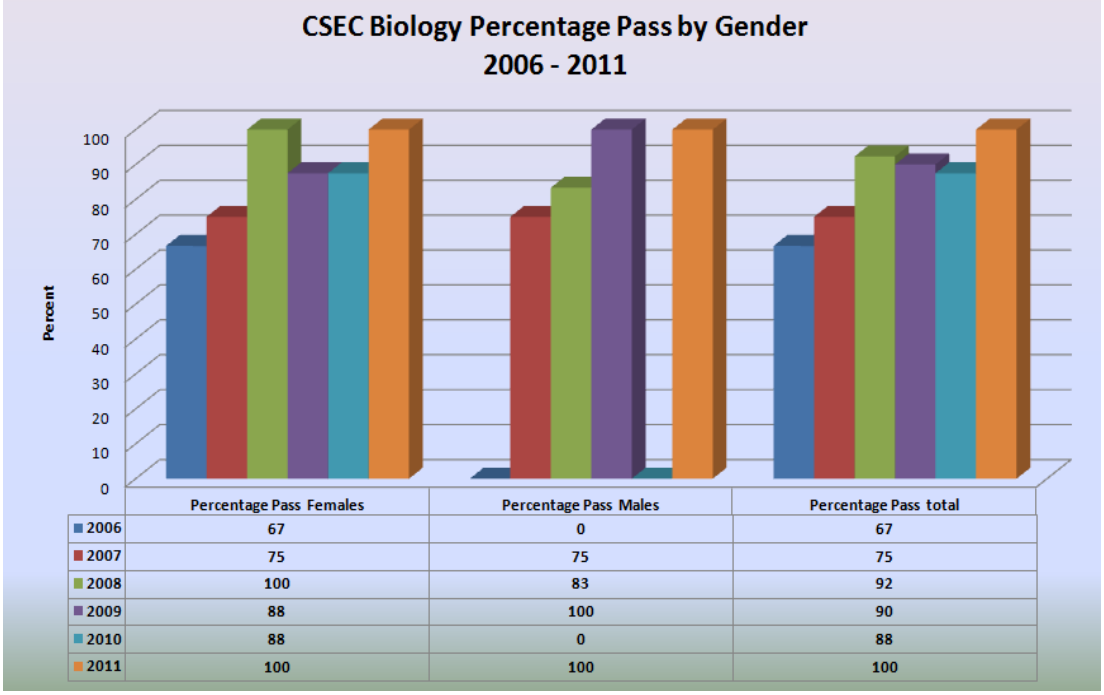
Females predominantly sit the subject as the mean number of females sitting is 7 and 2 for males. In 2007 and 2008, the female – male ratio was 4:4 and 7:6 respectively. The decline in male students sitting began in 2009 and the trend continued up to 2011.

Table 47: Performance in CSEC Biology by Gender

	Females Sitting	Females Passing	% Pass	Males Sitting	Males Passing	% Pass	Total Sitting	Total Passing	% Pass
2006	6	4	67	0	0	-	6	4	67
2007	4	3	75	4	3	75	8	6	75
2008	7	7	100	6	5	83	13	12	92
2009	8	7	88	2	2	100	10	9	90
2010	8	7	88	0	0	-	8	7	88
2011	6	6	100	2	2	100	8	8	100
Mean	7	6	86	2	2	90	9	8	85
SD	1.52	1.75	13.35	2.34	1.90	12.50	2.40	2.73	12.21

The mean percentage pass rate for females is 86% with a SD of 13.35 and for males it was 90% with a SD of 12.5. The overall pass rate is 85% with a SD of 12.21. This indicates that a high percentage of students who sit biology is successful. This should be a motivating factor to attract other students, especially boys who are extremely underrepresented in the siting of this subject.

Figure 7: CSEC Biology Percentage Pass by Gender



Quality of Passes

The quality of passes in shown in Table 48. The majority of students sitting tend to get the minimum pass which is a Grade III. With the exception of 2008, females did better at achieving a Grade I.

Table 48: Grades Attained in Biology by Gender

	GRADES									
Year	I		II		III		IV		Other	
	F	M	F	M	F	M	F	M	F	M
2006	0	0	4	0	1	0	0	0	0	0
2007	0	0	3	3	1	1	0	0	0	0
2008	2	2	3	2	2	1	0	1	0	0
2009	1	0	1	2	5	0	1	0	0	0
2010	2	0	2	0	3	0	1	0	0	0
2011	1	0	2	0	3	1	1	0	0	0

Performance in Information Technology

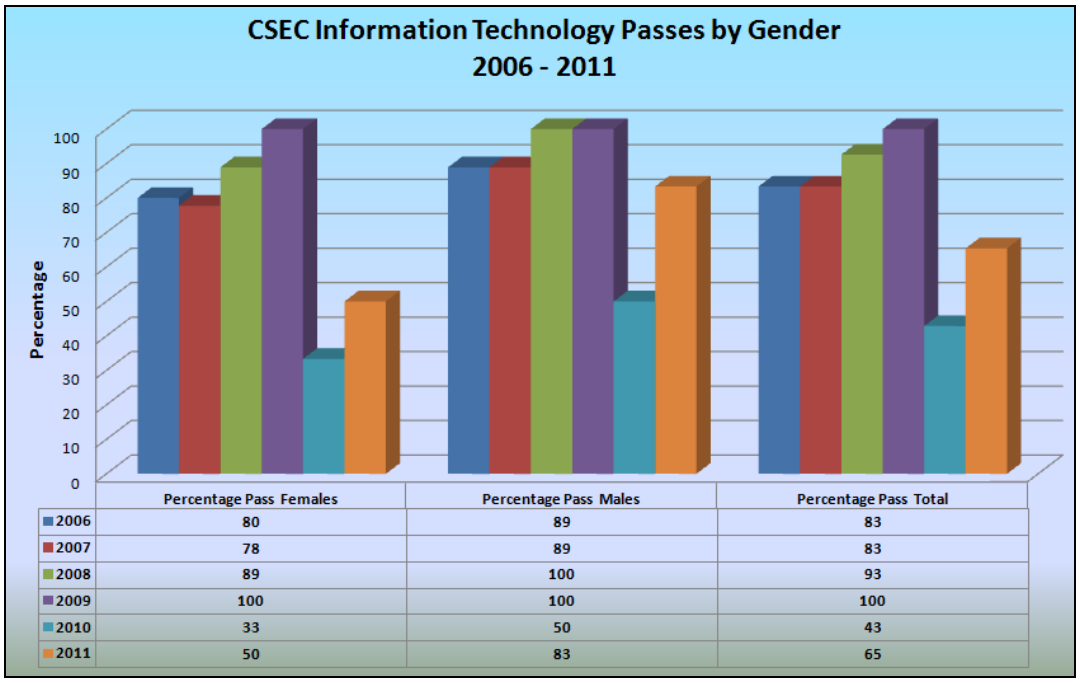
The mean number of females sitting is 15 compared to 11 for males. Males had a higher percent pass at 85% and girls were at 72%. The overall pass rate was 78%. Since 2009 when 21 sat the exam and there was a 100% pass rate, there has been a steady decline in student performance. In 2010, 21 took the examination and only 42% passed and although there was an increase in 2011 up to 65%, it was still below standards set in the earlier years which were all above 80%. There is an upward trend however, as by 2011 twenty-six students sat the examination and the pass rate was 78%.

Table 49: Grades Attained in Information Technology by Gender

	Females Sitting	Females Passing	Percent Passing	Males Sitting	Males Passing	Percent Passing	Total Sitting	Total Passing	Percent Passing
2006	15	12	80	9	8	89	24	20	83
2007	18	14	78	18	16	89	36	30	83
2008	18	16	89	9	9	100	27	25	93
2009	15	15	100	6	6	100	21	21	100
2010	9	3	33	12	6	50	21	9	43
2011	14	7	50	12	10	83	26	17	65
Mean	15	11	72	11	9	85	26	20	78
SD	3.31	5.12	25.08	4.10	3.71	18.48	5.56	7.15	20.73

Figure 8 shows the percent passes for females and males and the overall performance. Boys have consistently outperformed girls in this subject. After the decline in passes in 2012, from 100% to 43%, the boys clawed their way back up to 83% in 2011. The girls on the other hand, showed relatively small gains as they moved from 33% to 50%.

Figure 8: CSEC Information Technology Passes by Gender



	Percentage Pass Females	Percentage Pass Males	Percentage Pass Total
2006	80	89	83
2007	78	89	83
2008	89	100	93
2009	100	100	100
2010	33	50	43
2011	50	83	65

Quality Passes

Most students tended to get a Grade II pass. This was more so for females rather than males with a mean of 7 and 5 respectively. There has been a decline in the quality of passes since 2009. In 2010 and 2011 only 1 boy obtained a Grade I. Also since 2009, far more students are obtaining a Grade IV.

Table 50: Grades Attained in Information Technology by Gender

	GRADES									
	I		II		III		IV		Other	
Year	F	M	F	M	F	M	F	M	F	M
2006	1	2	5	1	6	5	2	1	1	0
2007	1	5	9	9	4	4	0	0	0	4
2008	5	3	9	4	2	2	2	0	0	0
2009	5	0	9	6	1	0	0	0	0	0
2010	0	0	1	3	2	3	5	6	1	0
2011	0	1	6	4	1	5	7	1	0	1
	2	2	7	5	3	3	3	1	0.33	1
	2.37	1.94	3.21	2.74	1.97	1.94	2.80	2.34	0.52	1.60

Summary of Key Findings

a. Approximately 50% of the cohort of students in Grade 11, sit CSEC English A. The mean percent pass is 82%. When calculated as a percentage of the cohort of Grade 11 students, it falls to 40%.
b. Females outperform males as their average percent passing for English A is 86 compared to 76 for males.
c. Whereas there has been a steady decline in the number of females sitting English A, from 22 in 2006 to 19 in 2011, boys have an increased number sitting since 2006 as they moved from 8 sitting to 16 in 2011.
d. The mean number of students sitting Mathematics is 30 representing approximately 43% of the cohort of Grade 11 students. Based on the number sitting, the mean percent pass is 64, but based on the Grade 11 cohort, it would be 27%.
e. Disaggregation by gender reveals that more females sit Mathematics than males as the average number sitting is 18 for females and 12 for males. The mean percent pass for females is 64 and for boys, 63.

f. The trend in the pass rate for mathematics indicates that for the last three years (2010 – 2012), there has been a decline in the percent of females passing the examination, moving from 86% to 42%. For that same period, there has been an increase in the percent passing for males, moving from 40% to 64%.
g. Most students who sat mathematics and passed the subject got the minimum Grade III pass.
h. The total number sitting Biology each year is relatively low as the mean number of students sitting the subject over the 6 years is 9 representing 13% of the cohort. The year 2008 saw an increase to 13 students but then there was a steady decline the following years and by 2011 only 8 students sat biology.
i. For biology, the mean percentage pass rate for females is 86% and for males it is 90%. The overall pass rate is 85%. This indicates that a high percentage of students who sit biology is successful.
j. Females predominantly sit biology as the mean number of females sitting is 7 and 2 for males. In 2007 and 2008, the female – male ratio was 4:4 and 7:6 respectively. The decline in male students sitting began in 2009 and the trend continued up to 2011.
k. The mean number of females sitting Information Technology is 15 compared to 11 for males. Males had a higher percent pass at 85% and girls were at 72%. The overall pass rate was 78%.
l. Since 2009 when 21 sat the Information Technology examination, and there was a 100% pass rate, there has been a steady decline in student performance. In 2010, 21 took the examination and only 42% passed and although there was an increase in 2011 up to 65%, it was still below standards set the in the earlier years which were all above 80%.
m. The mean number of students sitting Mathematics is 30 representing approximately 43% of the cohort of Grade 11 students. Based on the number sitting, the mean percent pass is 64, but based on the Grade 11 cohort, it would be 27%.

n. Disaggregation by gender reveals that more females sit Mathematics than males as the average number sitting is 18 for females and 12 for males. The mean percent pass for females is 64 and for boys, 63.
o. Boys have consistently outperformed girls in Information Technology. After the decline in passes in 2012, from 100% to 43%, the boys went back up to 83% in 2011. The girls on the other hand, showed relatively small gains as they moved from 33% to 50%.

CHAPTER 6: RECOMMENDATIONS FOR IMPROVING PEDAGOGICAL PRCATICES

Classroom Atmosphere

1. Classrooms must be transformed to include the display of students' work and the practice of cooperative learning must be enhanced and implemented system wide.

Teaching Strategies – Differentiated Instruction

2. Teachers need to be trained in the use of differentiated Instruction strategies to meet the needs of all learners.

    a. Prepare unit in the training manual on Differentiated Instruction

    b. Train teachers in the use of available data to plan for differentiated instruction and its application to the teaching and learning process.

    c. Train teachers to develop intervention plans for students who are performing below age and grade expectancy levels.

    d. Assist teachers to effect modifications and accommodations for struggling students.

3. The implementation of differentiated instruction must be monitored by the Education Officers of the MOE to ensure that teachers are supervised and supported in the implementation of strategies.

Assessment

4. The training for teachers in both primary and secondary schools should include as much of the following as possible:

    a. Introduce teachers to the three-fold assessment approach: assessment for learning, assessment of learning, and, assessment as learning;

b. Train teachers to be able to align teaching with testing to ensure that the appropriate skills and knowledge are being assessed.

c. Train teachers to develop and use test blueprints, including identifying appropriate learning outcomes (Bloom's Revised Taxonomy) from the curriculum for their lesson plan;

d. Training of teachers on how to construct test items – select response (objective) and construct response items;

e. Demonstrate the use of performance and product assessment as alternative techniques to paper and pencil;

f. Discuss assessment in the affective domain;

g. Explore the requirements and procedures for testing in the early years (K-grade 2);

h. Help teachers to assess the adequacy of their tests;

i. Explore the use of scoring rubrics;

5. Train Educational Officers and Heads of Departments to coordinate grade level and subject assessment throughout MSS using a table of specifications as a management tool;

Classroom Behaviour Management

a. Assist teachers to write learning outcomes in the affective domain.

b. On-going training for teachers in behaviour management strategies

c. Examine various methods to mediate conflict in the secondary classrooms and to identify problem behaviours early including the likely causes;

d. Show how teaching strategies and behavioural outcomes are linked.

Performance on National and Regional Examinations

a. In-service training emphasizing strategies for the teaching of Language Arts and Mathematics need to be ongoing and supported by a cadre of experts in the field.

b. Reduce the gender gap in performance by implementing gender sensitive instructional programmes and opportunities to enhance the performance of male students.

c. Increase the number of students sitting CSEC examinations, especially English A and Mathematics.

d. In-service training and upgrading of the qualification of teachers at the high school level to ensure higher percentage pass and improved quality of passes in all subject areas.

e. Provide appropriate instructional materials and equipment to enhance the teaching-learning experience to facilitate improved student performance.

f. Improve the support services provided for students with special needs so that they can better fit into an inclusive environment.

REFERENCES

Black-Hawkins, K., Florian, L., & Rouse, M. (2008). Achievement and Inclusion in Schools and Classrooms: Participation and Pedagogy. *British Educational Research Association*, (p. 22). Edinburgh.

Chingos, M. M., & Whithurst, G. J. (2012). *Choosing Blindly: Instructional Materials, Teacher Effectiveness and the Common Core.* Washington D.C.: Brown Center on Education POlicy at Brookings.

Cooper, P. (1993). *Effective Schools for Disaffected Students: Integration and Segregation.* London: Routledge.

Darling-Hammond, L. (2000, January 8). *Teacher Quality and Student Achievement.* Retrieved from Education Policy Analysis Archives: http://epaa.asu.edu/ojs/article/view/392

Frankham, J., Edwards-Kerr, D., Humphrey, N., & Roberts, L. (2007). *School exclusions: Learning Partnerships outside mainstream education.* York: Joseph Rowntree Foundation.

Goe, L., & Stickler, M. L. (2008). *Teacher Quality and Student Achievement: Making the Most of Recent Research.* National Comprehensive Center for Teacher Quality, Washington D.C. Retrieved from www.ncctq.otg

Harris, D. N., & Sass, T. R. (2007). *Teacher Training, Teacher Quality and Student Achievement.* Working Paper 3, National Center for Analysis of Longitudinal Data in Education Research .

Hill, H. C., Rowan, B., & Ball, D. L. (2005). The Effects of Teachers' Mathematical Knowledge for Teaching on Student Achievement. *American Educational Research Journal, 42*(2), 371-406.

Klein, P. (2008). *Content Literacy .* Ontario: The Literacy and Numeracy Secretariat .

Lavin, A., Korte, L., & Davies, T. (2010). The impact of classroom technology on student behaviour. *Journal of Technology Reserach, 2*, 1-13.

Matthews, J., Kizzie, K. T., Rowley, S. J., & Cortina, K. (2010). African American and Boys: Understanding the Literacy Gap, Tracing Academic Trajectories, Evaluating the Role of Learning Related Skills. *Journal of Educational Psychology, 102*(3), 757-771.

McIntosh, K., Horn, R. H., Chard, D. J., Dickey, C. R., & Bran, D. H. (2008). An Inclusive Approach to Improving Early Literacy Skills of Students with Emotional and Behavioural Disorder. *Journal of Special Education, 42*(3), 131-147.

Okiobia, E. (2011). Availability and Teachers' Use of Instructional Materials in the Implementation of Social Studies in Junior Secondary Schools in Edo State, Nigeria in. *Review of European Studies, 3*(2).

Rice, J. K. (2003). *Teacher Quality: Understanding the Effects of Teacher Attributes.* Washington D.C: Economic Policy Institute.

APPENDIX 1: CLASSROOM OBSERVATION INSTRUMENT

CLASSROOM OBSERVATION CHECKLIST

SCHOOL: _____ GRADE:_____

TOPIC/LESSON:_____ Time:_____ mins.

SUB-TOPIC(S):_____

NUMBER OF STUDENTS: _____Male _____ Female

OBSERVER:_____ DATE:_____

CHARACTERISTICS	Observed All of the Time - 3	Observed Sometimes - 2	Not Observed - 1	COMMENTS: describe activities, interaction, layout of the classroom, the poster displays, behaviours of students and teacher.
CLASSROOM ATMOSPHERE				
1.Seating is arranged for co-operative learning and interaction				
2.Visual aids, literacy/math posters are displayed on the walls				
3.Students' work is prominently displayed				
4. Students are allowed to talk to each other				
5. Good interaction between teacher and students				
TEACHING STRATEGIES				
6.Lesson appears to have been planned – structured and coherent				

CHARACTERISTICS	Observed All of the Time - 3	Observed Sometimes - 2	Not Observed - 1	COMMENTS: describe activities, interaction, layout of the classroom, the poster displays, behaviours of students and teacher.
7. Learning goals are clear				
8.Teaching strategies/activities are appropriate for the lesson				
9.Activities are interactive and hands-on				
10.Teacher uses technology in the lesson (e.g. AV/DVD, Tapes, PPT, Multi-Media Projector)				
11. Students use computer/language lab				
12.Teacher uses a variety of teaching strategies to accommodate different learning styles				
13.Teacher varies the pace of instruction to reach students of all ability levels				
14. Students work in groups				
15. Teacher allows students to explore similar/advanced themes linked to the topic				
16. Students get a chance to 'try out' problems				

CHARACTERISTICS	Observed All of the Time - 3	Observed Sometimes - 2	Not Observed - 1	COMMENTS: describe activities, interaction, layout of the classroom, the poster displays, behaviours of students and teacher.
17. Teacher applies the lesson to 'real world' situations				
18. Instruction is varied to accommodate different learning styles				
19.Teacher provides instructional support to students needing assistance				
20. Focus of the lesson and activities appear to be aligned				
21. Teacher uses a variety of instructional materials				
22. Assessment procedures and activities are clearly outlined in lesson plan and are appropriate				
23. Appropriate degree of challenge				
24.The teaching method(s) is/are appropriate for the content of the lesson				
25. Evidence of ongoing assessment				
26.Students are participating in the lesson (raising hands, responding to the teacher's questions, asking questions)				
27. Teacher makes effort to differentiate instruction				
28.Differentiated work matches				

CHARACTERISTICS	Observed All of the Time - 3	Observed Sometimes - 2	Not Observed - 1	COMMENTS: describe activities, interaction, layout of the classroom, the poster displays, behaviours of students and teacher.
students' needs				
29. Differentiation evident in content, process and/or product				
TEACHER-STUDENT INTERACTION				
30. Teacher checks on and assists students who appear to be confused or have fallen behind				
31. Teacher uses grade/age level talk				
32. Students express their own view of the lesson				
33. Teacher provides support to students with special needs				
34. Teacher questions, listens and responds to students				
35.Students are participating in the lesson (raising hands, responding to the teacher's questions, asking questions)				
36. Students seek assistance from the teacher				
37.Teacher walks around the room and interacts with students				

CHARACTERISTICS	Observed All of the Time - 3	Observed Sometimes - 2	Not Observed - 1	COMMENTS: describe activities, interaction, layout of the classroom, the poster displays, behaviours of students and teacher.
CLASSROOM MANAGEMENT				
38. Some students disrupt the lesson				
39.Teacher addresses disruptive/problematic behaviours				
40. Students follow instruction the first time				
41.Teacher uses a variety of disciplinary strategies				
42. Positive reinforcement of effort is evident				
43. Appropriate behaviours are recognized and/or rewarded				
44.Teacher responds to students inattentiveness, confusion, boredom and curiosity				
45. Some students appear distracted/hindering the lesson				

Name of text books used (if any):_____

_____

Materials being used during the lesson: _____

_____

_____

ADDITIONAL NOTES:_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX 2a: TEACHER SURVEY INSTRUMENT – PRIMARY

APPENDIX 2B: TEACHER SURVEY INSTRUMENT – SECONDARY

APPENDIX 3: STUDENT QUESTIONNAIRE

STUDENT QUESTIONNAIRE

This Questionnaire is asking you to describe the classes you take in this school. Please do not give your name. Please complete the questions on all 4 pages.

TELL US WHO YOU ARE? Tick √ what is most appropriate for you.

NAME OF YOUR SCHOOL | |

GENDER O **MALE** O **FEMALE**

WHAT IS YOUR CURRENT GRADE?

O GRADE 7 **O** GRADE 8 **O** GRADE 9

O GRADE 10 **O** GRADE 11

HAVE YOU REPEATED ANY GRADE? O YES O NO

IF YES, WHICH GRADE? _____

HOW OLD ARE YOU?

O 12 -13 YEARS OLD **O** 14 – 15 YEARS OLD **O** 16-17 YEARS OLD

O 18 YEARS AND OLDER

WHAT EXTRA-CURRICULLAR ACTIVITY DO YOU PARTICIPATE IN AT SCHOOL?

For each of the teaching and assessment strategies in the table below please tick (√) which is ***frequently used*** by your teachers in your classes; indicate those you think are ***most or least effective*** to help you learn, and, which you ***enjoy most or least***.

You may **tick (√)** more than once for each item.

	TEACHING AND ASSESSMENT STRATEGY	**RESPONSE**				
	Teaching Strategies	**Frequently Used**	**Most Effective**	**Least Effective**	**Enjoy Least**	**Enjoy Most**
1	Music, Dance, Drama, Art					
2	Workshops					
3	Teacher Talk/Lecture style					
4	Resource Persons					
5	Whole Class Discussion					
6	Hands-on problem solving activity					
7	Computer - Subject Specific Software					
8	Internet Materials					
9	Group Work					
10	Worksheets					
11	Magazines, Novels, Newspapers					
12	Brainstorming ideas, concept maps					
13	Past Papers					
14	Taking Notes from the Teacher					
15	Individual/Desk Work					
16	Audiotape					
17	DVD – film/movie/multi-media projector					
18	Reading from the textbook					
	Assessment Strategies					
19	Homework/Assignment					
20	Essay					
21	Journaling					
22	Multiple Choice Questions					
23	End of Term Examination					
24	Peer Reviewing					
25	Half-term tests					
26	True/False Questions					
27	Feedback from teacher					
28	Fill-in-the Blank Questions					
29	Portfolio					
30	Matching Questions					

31	Presentation Project					
32	SBA					
33	Scoring Rubrics					

Please use the following Rating Scale to indicate your level of agreement with the description of your classes in the table below. Your rating should best reflect your experiences in this school. **Tick (√)** only one for each statement.

Strongly Agree – This is true nearly all of the time.

Agree – This is true most of the time.

Disagree – This is not true most of the time.

Strongly Disagree – This is almost never true

	CLASSROOM CONTEXT	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
34	Good atmosphere that makes me feel like I am a part of the class				
35	The classes fully cover what I expect to learn				
36	Teachers are usually able to manage discipline in the classroom				
37	Classes are interactive and enjoyable				
38	Teaching strategies are varied and make me interested in the lessons				
39	Teachers use different ways to manage student behaviours				
40	Difficult and I cannot cope				
41	Some students with behaviour problems should be removed from the school				
42	Useful and will help me in the future				
43	Poor discipline sometimes interfere with teaching and learning				

44	Interesting and makes me want to learn				
45	Some students often disrupt the classes				
46	Some students cannot cope academically and should not be included in our classes				
47	Confusing and frustrating				
48	Students who have difficulty learning should remain in our classes and receive help there.				

Use the scale below to indicate your experience of assessment and teaching in this school. **Tick** √ only one for each statement.

	TEACHING AND ASSESSMENT	**Very Often**	**Often**	**Sometimes**	**Seldom**	**Never**
49	My teachers are interested in my progress					
50	Teachers give me problems to solve or investigate					
51	Teachers' comments about my work are encouraging					
52	Teachers expect me to remember things I learned in past lessons					
53	The activities I do are set by the teacher					
54	My teachers frequently provide feedback on my work					
55	Teachers feedback on work done is positive					
56	I try to find solutions to problems in the lessons					
57	Teachers show the correct method for solving problems					
58	Teachers insist that my activities are completed on time					

	TEACHING AND ASSESSMENT	Very Often	Often	Sometimes	Seldom	Never
59	I hardly get feedback on my work					
60	Teachers expect me to find my own solution to problems in the lessons					
61	Teachers feedback on my work is negative					
62	I learn the teachers' method of solving problems in the lesson					
63	I know what it takes to be successful in High School					
64	I have good study skills					