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Professional Paper

Because you can't wait till the year's end:

Using SRI to evaluate students' reading proficiency levels in Singapore

An analysis of entry test results of nine Singapore schools

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SRI SCHOLASTIC READING INVENTORY

Using Scholastic Reading Inventory to evaluate students' reading proficiency levels in Singapore: An analysis of entry test results of nine Singapore schools

Introduction

Scholastic Reading Inventory (SRI) is a research-based, computer-adaptive assessment for Kindergarten, Primary, Secondary and Junior College levels that allows educators to quickly and accurately assess reading comprehension over the course of a student's education to inform instruction and match students to text using the Lexile Framework for Reading. This assessment is used to set growth goals, monitor progress, forecast performance and help place students at the best level in a reading programme so that they will read with success.

This paper presents an analysis of the results from the SRI benchmark assessment used at entry into the programme in nine primary and secondary schools in Singapore to measure reading proficiency. The objective of the analysis is to understand the student profiles revealed and to discuss how these may inform decisions with regard to literacy policies and practices within the school. Later studies will present a comparative analysis of the development of reading proficiency in students over time across different schools.

SRI was implemented at different times during the academic years 2010 and 2011 in the nine schools studied in this research paper. Indeed, the results of the study point to a classroom assessment that is statistically "aligned" to school-based assessments as well as high stakes tests and that can be used to identify students in need of assistance, effectively guiding instructional intervention early in the school year.

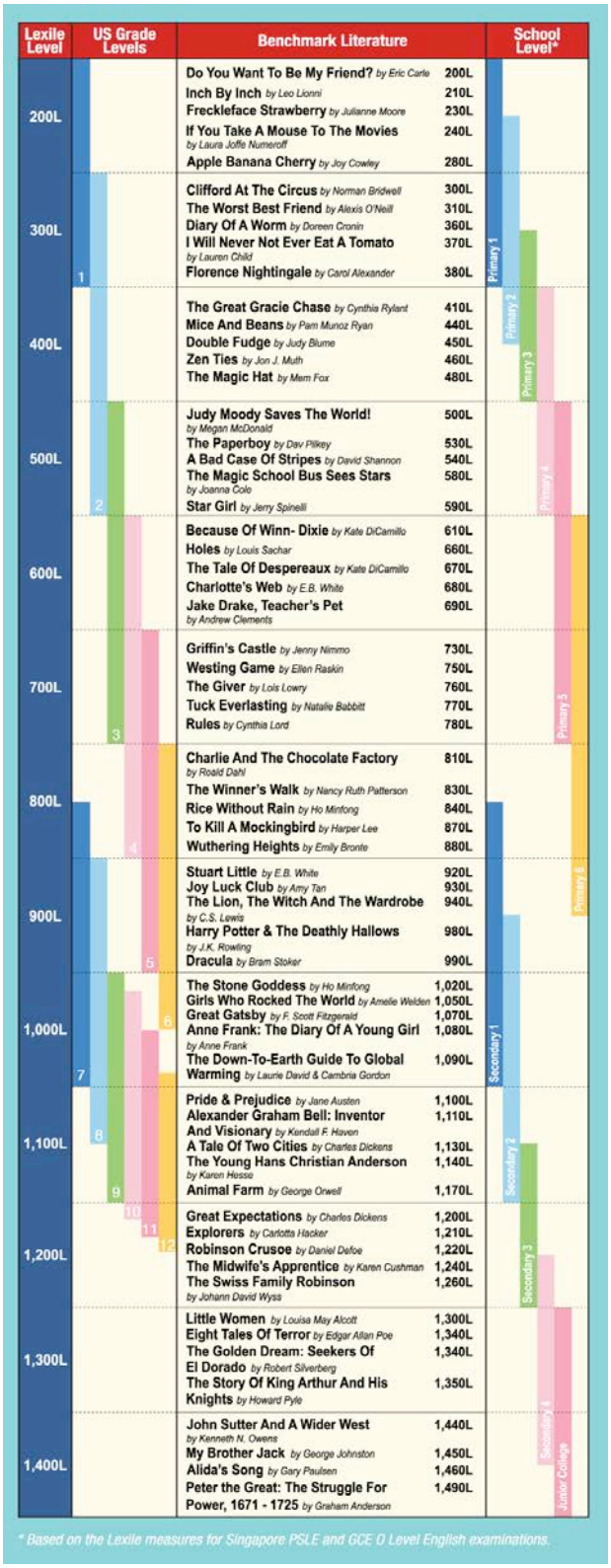
Using data analysed from the SRI reports generated at school, class and individual student level, this paper intends to demonstrate the benefits of using a consistent, objective and adaptive technology incorporating a measure such as *Lexiles* as a measure of reading fluency to inform classroom instruction and consequently, the implications for methodology and materials used in the classroom. Reference will be

made to the theoretical underpinnings of SRI and the Lexile Framework for Reading in the context of Singapore schools as outlined in an earlier professional paper: *Because you need to know what is most appropriate for your students to read: Using SRI to match readers to reading texts in Singapore.*

The Singapore Lexile Framework

Based on collaborative research with MetaMetrics Inc. in which a sample of texts and examination papers were measured, Scholastic developed the following draft Lexile Framework for Singapore schools (Figure 1). It establishes the Lexile range for each level in primary and secondary school. This provides the benchmark against which teachers can evaluate the Lexile scores derived from SRI to determine if students are reading on-grade level, above or below. This framework together with SRI assessment data, will also enable teachers and school administrators to make more effective decisions in the design of instructional programmes, independent reading programmes, learning support programmes and to measure progress in order to evaluate the effectiveness of initiatives implemented. It is intended to provide educators an independent and objective measure to monitor progress in reading comprehension.

Figure 1: Lexile Framework for Singapore



School Level	Lexile Range
Primary 1	200L – 400L
Primary 2	250L – 450L
Primary 3	350L – 500L
Primary 4	400L – 600L
Primary 5	500L – 800L
Primary 6	600L – 950L
Secondary 1	850L – 1100L
Secondary 2	950L – 1200L
Secondary 3	1150L - 1300L
Secondary 4	1250L – 1450L
Junior College	1300L – 1500L

The Singapore Schools Experience

A brief profile of the nine schools that are the subjects of this research is presented below. All schools are adopters of the SRI online assessment, but the schools are different in terms of history, location and student demographics.

Figure 2: School Profile

	PROFILE	SRI ENROLMENT	SRI COMMENCEMENT
PRIMARY SCHOOLS			
School 1	New school in a housing estate	• 1158 students • Primary 1–5	July 2010
School 2	An established school with a history of more than 50 years	• 223 students • Primary 4	April 2011
School 3	An established school in the high-performing band	• 1178 students • Primary 1–5	May 2011
SECONDARY SCHOOLS			
School 4	A co-ed government-aided mission school	• 820 students • Secondary 1– 3	October 2010
School 5	A co-ed mission school	• 1170 students • Secondary 1–4	October 2010
School 6	An established co-ed government school	• 250 students • Secondary 1	January 2011
School 7	An established high-performing government school	• 229 students • Secondary 1	February 2011
School 8	A co-ed school	• 272 students • Secondary 1	April 2011
School 9	A government co-ed school	• Secondary 1–3	April 2011

Research Methodology and Design

Figure 2 above presents a brief profile of each of the nine schools in this study and the last column in the table lists the period that the first SRI assessment tool was administered in the school. Prior to the implementation, teachers and students were briefed on the test and the process and were given opportunities to trial and familiarise themselves with the test prior to taking the actual test.

Data from the first SRI assessment carried out in each school has been extracted and represented in tables and bar graphs to identify clusters and trends, to make inferences and draw conclusions based on an understanding of the student cohort of each school. The SRI assessment data tables and bar graphs that follow present the reading proficiency level of students by class. After the presentation of data in each class, a commentary follows on observations with regard to the data. At the end of the analysis by class, data is presented by class level across the school to take note of trends across the grades.

For each for the schools above, the SRI assessment data for whole-school and class level proficiency is analysed. For the six secondary schools in this report, only the results of the Express classes are analysed. Figure 3 below presents the legend explaining the classification of student performance in SRI.

Figure 3: Classification of Student Performance in SRI

Advanced	Students are reading at a lexile level above that expected for their grade.
Proficient	Students are reading in the top 50% lexile range for their grade.
Basic	Students are reading in the bottom 50% lexile range for their grade.
Below Basic	Students are reading at a level of proficiency below grade level.

Figure 4 below presents the Lexile Band Range at each level for Singapore students based on which students are classified in the groups presented in Figure 3 above.

Figure 4: Lexile Band Range

Singapore School Level	Lexile Level (L)			
	Below Basic (≤)	Basic	Proficient	Advanced (≥)
Primary 1	200L	300L	400L	401L
Primary 2	250L	350L	450L	451L
Primary 3	350L	425L	500L	501L
Primary 4	400L	500L	600L	601L
Primary 5	500L	650L	800L	801L
Primary 6	600L	775L	900L	951L
Secondary 1 Express	850L	975L	1100L	1101L
Secondary 2 Express	950L	1075L	1200L	1201L
Secondary 3 Express	1150L	1225L	1300L	1301L
Secondary 4 Express	1250L	1350L	1450L	1451L
Junior College 1	1300L	1400L	1500L	1501L
Junior College 2	1300L	1400L	1500L	1501L
Secondary 1 Normal Academic	700L	825L	950L	951L
Secondary 2 Normal Academic	800L	925L	1050L	1051L
Secondary 3 Normal Academic	1000L	1075L	1150L	1151L
Secondary 4 Normal Academic	1100L	1200L	1300L	1301L

Limitations of the Study

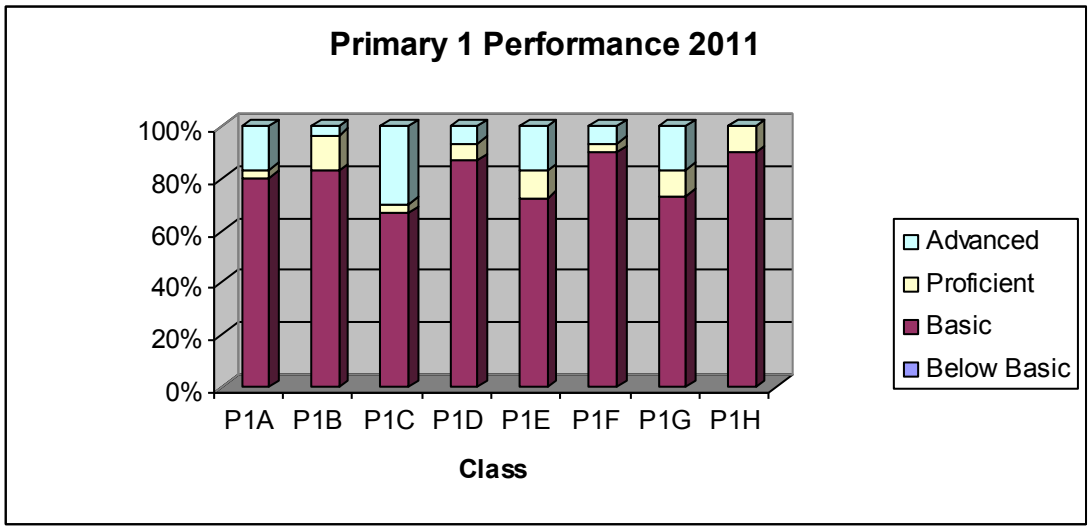
Given the scope of study and analysis of this paper, it is not a time series analysis and does not present student performance over time. However, within each school, it is reasonable to assume that across levels, the demographics and literacy backgrounds of students are similar. Therefore, changes in reading proficiency across levels may be said to be resulting from literacy interventions or lack thereof in the school at each level. It may be speculated that the results presented of a particular school across levels may also be indicative of the progress of the same cohort across levels if this were a time series presentation of the same cohort of students presented over the years in each grade level. It was not within the scope of this study to correlate performance to teacher competency or literacy practices in the school though some inferences may be made.

School 1

Results of the first SRI assessment for the Primary 1 to 5 cohort. The test was administered in July 2010, after students had six months of instructions in the year.

Primary 1

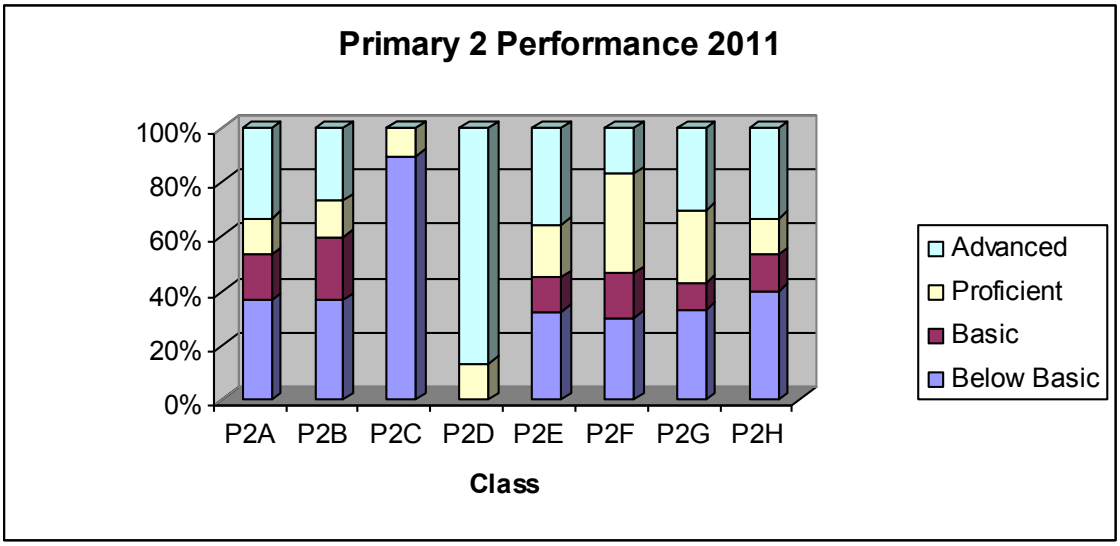
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P1A	0	24	1	5	30
P1B	0	24	4	1	29
P1C	0	20	1	9	30
P1D	0	26	2	2	30
P1E	0	21	3	5	29
P1F	0	27	1	2	30
P1G	0	22	3	5	30
P1H	0	27	3	0	30
Whole Level	0	191	18	29	**238**



The chart and bar graph showing the performance of eight P1 classes in School 1 shows that there are no students at Below Basic Proficiency level, however, the majority of students (80%) are in the Basic Proficiency Band. The remaining 20% lie within the Proficient and Advanced Bands. The majority of students therefore are in a delicate position, whereby students may progress to improved proficiency or may regress to below basic levels as the demands of academic study increase to require greater reading comprehension fluency.

Primary 2

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P2A	11	5	4	10	30
P2B	11	7	4	8	30
P2C	26	0	3	0	29
P2D	0	0	4	26	30
P2E	10	4	6	11	31
P2F	9	5	11	5	30
P2G	10	3	8	9	30
P2H	12	4	4	10	30
Whole Level	89	28	44	79	**240**

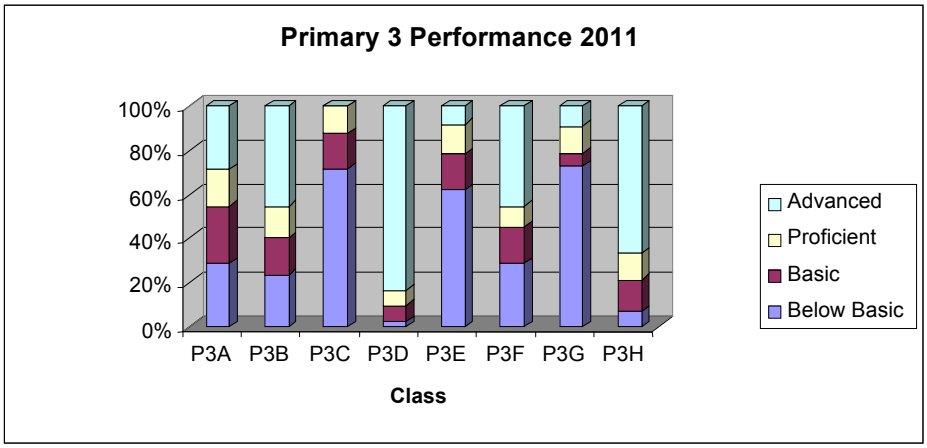


The chart and bar graph showing the performance of eight P2 classes in School 1 shows that the reading proficiency profile of students is quite different from the one observed for P1 students. Assuming that the demographic factors and literacy backgrounds of students in the school are similar, it may be that the change in the reading comprehension profile of students in P2 is a result of literacy practices and interventions during P1. Whereas in P1 there were no students with Below Basic proficiency, in P2, 37% of students have slipped into that category, and at the same time, 32% are in the Advanced Proficiency cateogry as opposed to only 12% in P1. The remaining 31% fall within the Basic and Proficient categories. Another point evident from the graphs above is that the school has carried out a regrouping exercise based on results during promotion of students from P1 to P2. Thus, P2D is the 'best' class based on the reading proficiency profile presented above with nearly

90% of students in P2D falling in the Advanced category and the remaining 10% in the proficient category. On the other hand, P2C is the weakest class, where the reading proficiency levels of students are almost reversed, with 90% in the Below Basic proficiency and the remaining 10% in the Proficient category.

Primary 3

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P3A	12	11	7	12	42
P3B	10	7	6	19	42
P3C	23	5	4	0	32
P3D	1	3	3	35	42
P3E	23	6	5	3	37
P3F	12	7	4	19	42
P3G	24	2	4	3	33
P3H	3	6	5	28	42
Whole Level	108	47	38	119	**312**



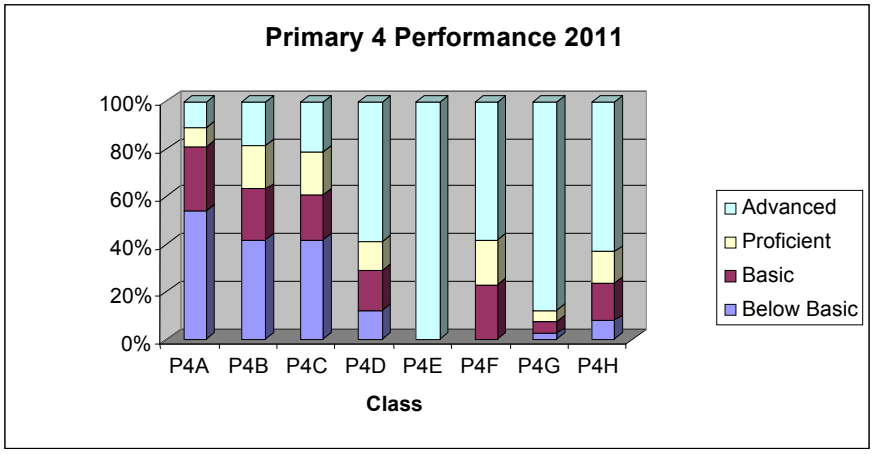
The chart and bar graph showing the performance of eight P3 classes in School 1 shows that 35% of students are in the Below Basic band which is similar to the size of this band in P2. Further investigation into cohort, literacy practices or other initiatives would reveal the reasons for this. At the same time, 38% of students are in the Advanced band as opposed to 32% in the previous year. This is an indication that more students are motivated and able to read at a level that is higher than the requirement for their grade level. 27% of students fall in the Basic and Proficient categories — this is a reduction in size from P2, however, proportionately there are

more students in the Basic category than in the Proficient category compared to P2. It is worth investigating the causes of this.

It is also worth noting that the reading proficiency profiles of the 'best' and 'weakest' classes — P3D and P3C respectively continue in P3. Bearing in mind that students may have been allocated classes based on their performance in P2, the data analysis shows distinct groups in the classes, with P3C, G and E having high proportion of students in the Below Basic band and P3 B, D, F and H having a high number of students in the Advanced band.

Primary 4

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P4A	20	10	3	4	37
P4B	16	8	7	7	38
P4C	16	7	7	8	38
P4D	5	7	5	24	41
P4E	0	0	0	42	42
P4F	0	10	8	25	43
P4G	1	2	2	35	40
P4H	3	6	5	24	38
Whole Level	61	50	37	169	**317**

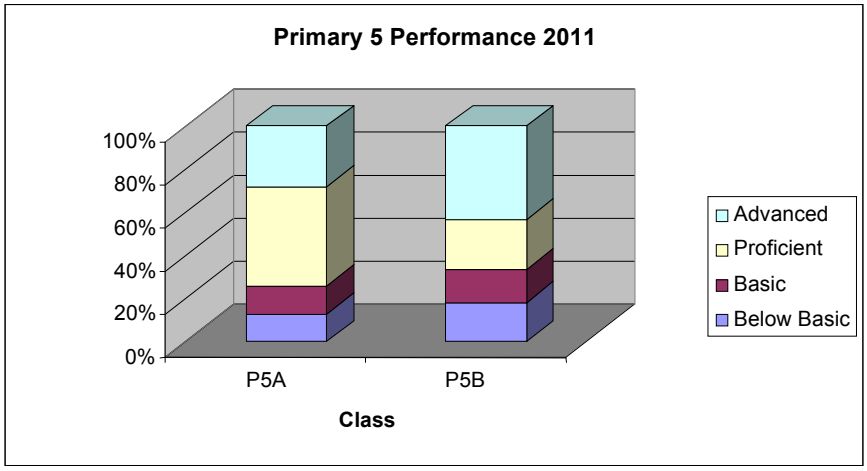


The chart and bar graph showing the performance of eight P4 classes in School 1 shows an interesting shift in the reading proficiency pattern as compared to that observed for P2 and P3. It is worth noting the P4 is an important year wherein high stakes assessment resulting in the streaming of students into various learning

options takes place which has a significant impact on their future studies and career. It is noteworthy that 68% of students fall into the Proficient and Advanced bands, compared to 50% in P3. Likewise, only 19% of students fall into the Below Basic band, compared to 35% in P3 — a reduction in size by nearly half. In addition, the students in this category seem to be clustered in classes P4 A, B and C — possibly a strategy by the school to provide focused remediation.

Primary 5

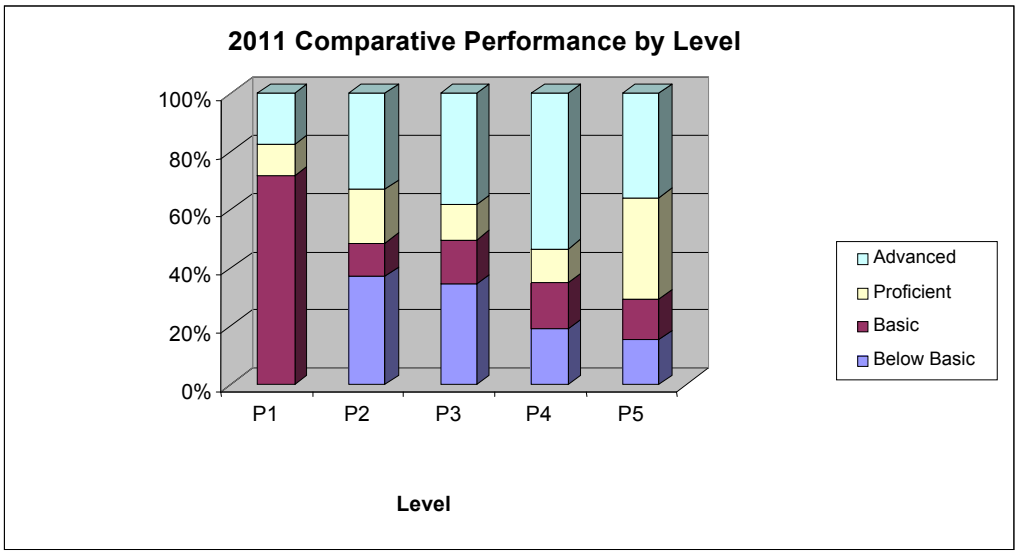
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P5A	5	5	18	11	39
P5B	7	6	9	17	39
Whole Level	12	11	27	28	**78**



The chart and bar graph showing the performance of two P5 classes in School 1 shows that some of the strong progress made in P4 has slowed down and even regressed in the upper two bands. However, it must be pointed out that these are new students to the school and the results cannot be seen as a cumulation of literacy instruction in the school over the years. The data analysed above shows that the proportion of students in the Proficient band has increased and that in the Advanced band has gone down. However, the proportion of students in the Below Basic band has also gone down to 15% which is a good indicator.

Comparative analysis across grade levels

Level	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P1	0	119	18	29	166
P2	89	28	44	79	240
P3	108	47	38	119	312
P4	61	50	37	169	317
P5	12	11	27	28	78
Whole School	270	255	164	424	**1113**



The analysis of student performance in SRI across the grade levels provides a profile of reading comprehension fluency at each grade level and shows that it changes across the grade levels. Even if we disregard P5 for this study because there are only two classes and this could lead to irregular results, certain trends can be noted. In the entry year, P1, more than 70% of students fall in the bottom half of the reading proficiency grouping, though none fall in the bottom Below Basic band. About 20% of students fall in the top band of Advanced proficiency. It may be inferred therefore, the 20% of students come from homes with strong literacy environments and another 10% with similar backgrounds that fall into the Proficient category.

However, from P2 onwards, and as the demands on literacy become more rigorous and complex, we see some students slip into the Below Basic category whereas in P1 there were none. However, the number of students in the Advanced category steadily increases and the number of students in the top half of the proficiency groupings remains steady at about 50% and peaking at 70% in P4. This indicates that the school's literacy practices are effective for the most part for the majority of students, but about 30% of the cohort needs specific intervention to move out of below basic proficiency and in order to be able to read successfully for academic achievement.

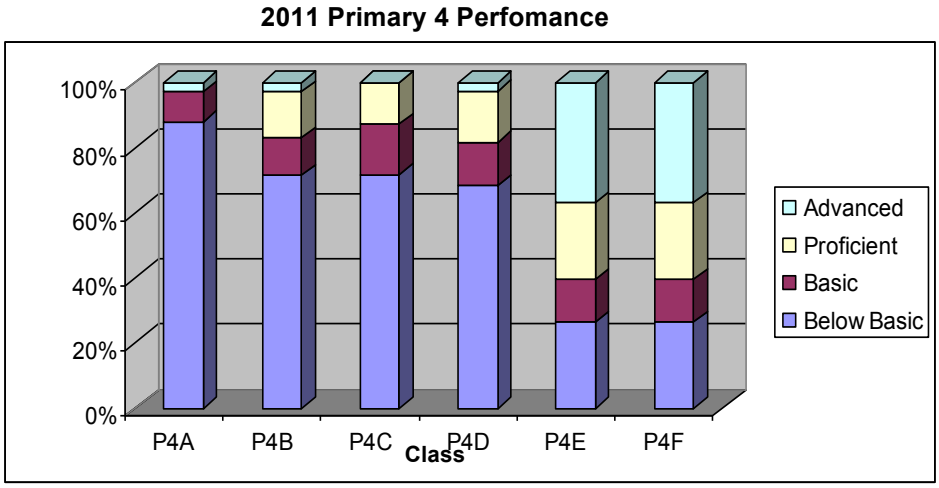
Whilst there has been overall improvement in students reading proficiency as they progress through the academic programme, there is a spread in ability levels in each class in each year group. This can prove quite a challenge for teachers as they strive to meet the different needs in their class. There is a need to provide for remediation and learning support for the small group of students in the lower ability levels, whilst at the same time providing additional challenge for the students in the high ability groups.

School 1 was among the first to adopt SRI school-wide as a means to assess students' reading proficiency. One result of the SRI assessment noted above was that close to 80% of the Primary 1 cohort was reading at a Basic level. This reinforced the existing school data, and allowed the school to focus on providing remediation and to design effective learning support programmes to enable students to come up to grade level reading fluency to meet the academic demands presented by the core curriculum. The need to ensure students could read on level was important as this in turn has implications for achievement in other subject areas as well.

School 2

Primary 4

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P4A	29	3	0	1	33
P4B	25	4	5	1	35
P4C	28	6	5	0	39
P4D	26	5	6	1	38
P4E	10	5	9	14	38
P4F	10	5	9	14	38
Whole Level	128	28	34	31	**221**

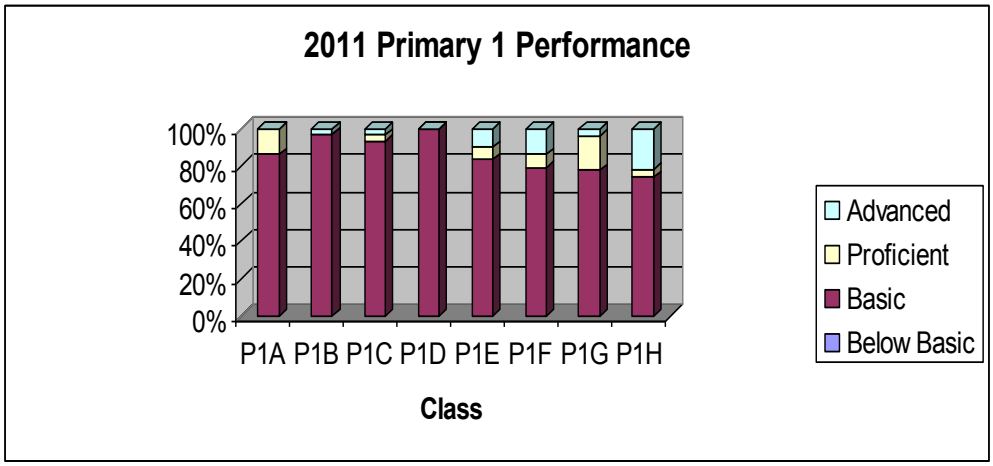


The bar chart above presents a snapshot of the different reading profiles of each Primary 4 class in this primary school. The initial assessment data seems to indicate that across the level, 58% of the students are reading at a below basic level of proficiency. This is quite a high number and in stark contrast to the P4 performance of School 1 presented above where less than 19% fall into this category. Given that P4 is a high stakes year, this is a cause for concern and indicates significant intervention with specific and customised remediation programmes is required. The rest of the 43% of students are spread evenly across the remaining three categories, at about 14% each. This means that an overwhelming 72% of students fall in the bottom half of proficiency levels for P4. This has implications for materials used in the class, instructional strategies and classroom management for the level.

School 3

Primary 1

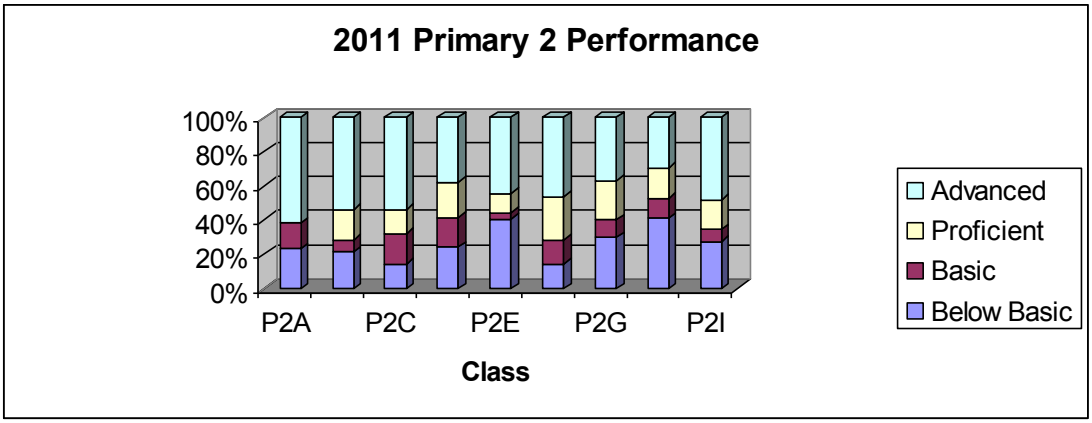
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P1A	0	25	4	0	29
P1B	0	29	0	1	30
P1C	0	26	1	1	28
P1D	0	24	0	0	24
P1E	0	25	2	3	30
P1F	0	23	2	4	29
P1G	0	21	5	1	27
P1H	0	17	1	5	23
Whole Level	0	190	15	15	**220**



The chart and bar graph showing the performance of eight P1 classes in School 3 shows that similar to School 1, all students are able to achieve at least the Basic level of reading proficiency and there are no students in the Below Basic band and an even smaller proportion of students in the upper half of the proficiency grouping. 86% of students fell into the Basic category. This has implications for the instructional design and literacy practices at this level.

Primary 2

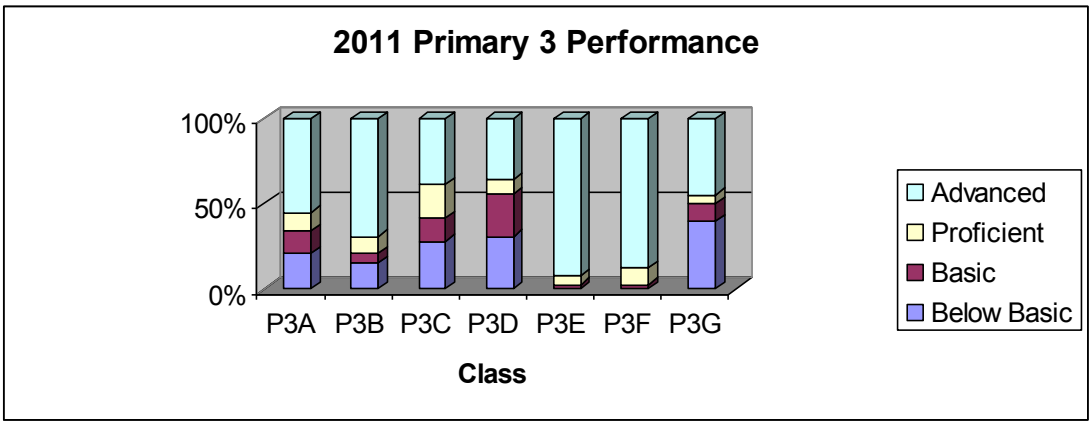
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P2A	3	2	0	8	13
P2B	6	2	5	15	28
P2C	4	5	4	15	28
P2D	7	5	6	11	29
P2E	11	1	3	12	27
P2F	4	4	7	13	28
P2G	9	3	7	11	30
P2H	7	2	3	5	17
P2I	8	2	5	14	29
Whole Level	59	26	40	104	**229**



The chart and bar graph showing the performance of nine P2 classes in School 3 shows that the reading proficiency profile of the cohort and in each of the classes has changed from P1. 45% of students registered in the Advanced category. However, it must be noted that many students appear not to have taken the test therefore the numbers would need to be qualified. However, regardless of this, the reading proficiency profile has changed with more students falling in the top half of the reading proficiency bands. About 29% of students still fall in the Below Basic category and this number would be higher if all students were accounted for.

Primary 3

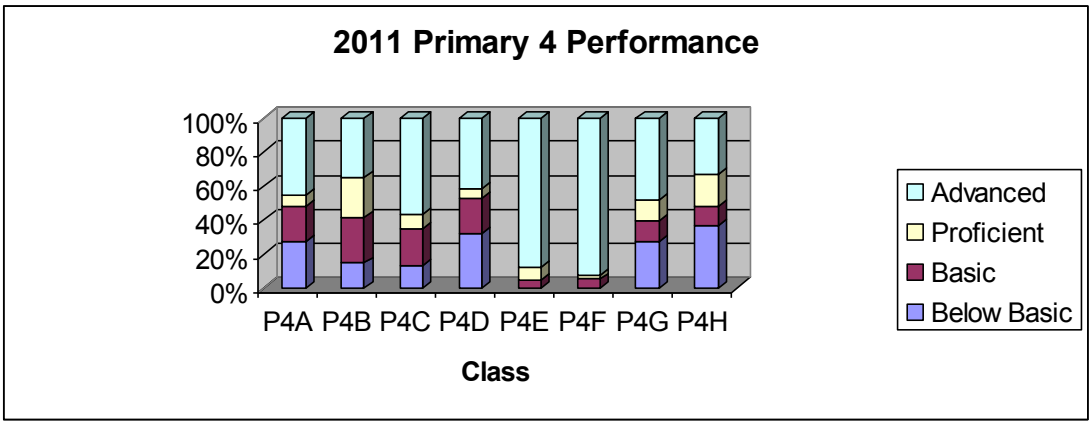
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P3A	8	5	4	21	38
P3B	6	2	4	27	39
P3C	10	5	7	14	36
P3D	11	9	3	13	36
P3E	0	1	2	38	41
P3F	0	1	4	35	40
P3G	15	4	2	17	38
Whole Level	50	27	26	165	**268**



The chart and bar graph showing the performance of seven P3 classes in School 3 shows the reading proficiency profile of the cohort continues to be strengthened with 62% of the students falling in the Advanced level of proficiency. However, 19% of students continue to fall in the Below Basic proficiency group.

Primary 4

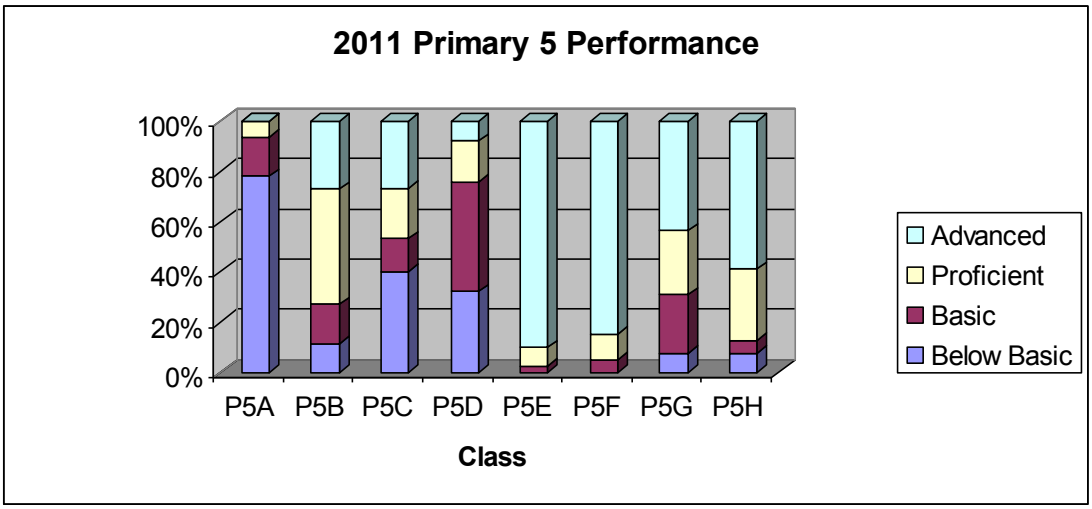
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P4A	9	7	2	15	33
P4B	5	9	8	12	34
P4C	5	8	3	21	37
P4D	11	7	2	14	34
P4E	0	2	3	35	40
P4F	0	2	1	34	37
P4G	9	4	4	16	33
P4H	10	3	5	9	27
Whole Level	49	42	28	156	**275**



The chart and bar graph showing the performance of eight P4 classes in School 3 shows that the reading proficiency profile of students continues to be strong with 57% of students in the Advanced category, though this is a slight drop from P3. However, 21% of students fall in the Below Basic group and this is an increase from P3. In P4, 33% of students fall in the lower half of the reading proficiency band, a rise from 28% in P3.

Primary 5

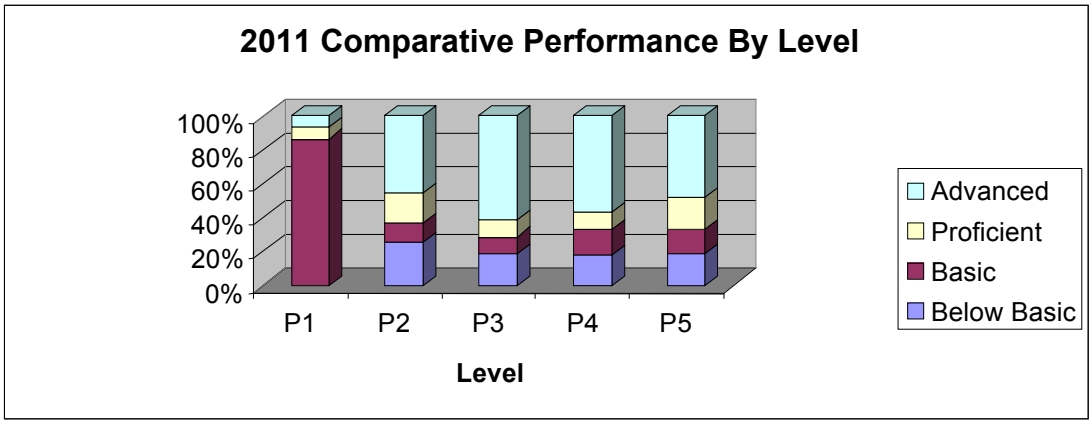
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P5A	25	5	2	0	32
P5B	3	4	12	7	26
P5C	6	2	3	4	15
P5D	8	11	4	2	25
P5E	0	1	3	37	41
P5F	0	2	4	33	39
P5G	3	9	10	17	39
P5H	3	2	11	23	39
Whole Level	48	36	49	123	**256**



The chart and bar graph showing the performance of eight P5 classes in School 3 shows that the reading proficiency profile of students continues on its downward trend with 48% in the Advanced category. However, 19% of students fall in the Below Basic group and this is a slight increase from P4. In P5, 34% of students fall in the lower half of the reading proficiency band which is similar to P4.

Comparative analysis across grade levels

Level	Below Basic	Basic	Proficient	Advanced	Total Number of Students
P1	0	190	15	15	220
P2	59	26	40	104	229
P3	50	27	26	165	268
P4	49	42	28	156	275
P5	48	36	49	123	256
Whole School	206	321	158	563	**1248**



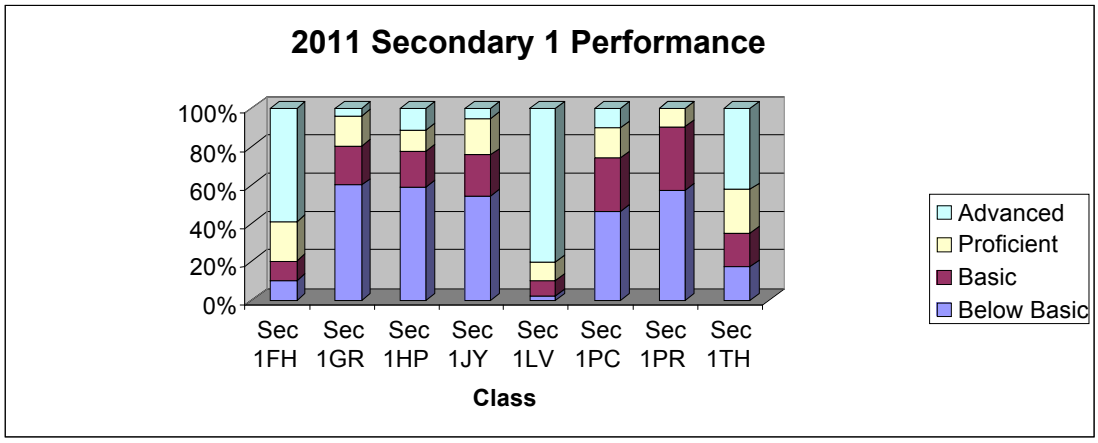
The SRI assessment results for this primary school have been very promising and validate the current instructional programmes and practices. In the Primary 1 cohort a high number of students are in the Basic reading proficiency category; at 86% of the cohort. Given that the level of basic proficiency and the socio-economic background of each year group is consistent each year, what stands out for this school is how the gap has been narrowed in the subsequent years and the number of students in the Basic category has steadily grown smaller. In Primary 2 this number stands at 11%, Primary 3 10%, Primary 4 15% and Primary 5 14%. What is also evident is that starting in Primary 2, more that 50% of each cohort has started to read at an Advanced level. The strategy of sorting the students by ability seems to have benefitted the students, as it allows for targeted and specific instruction. In all year groups the best students are concentrated in Classes E and F, with the weaker students in classes A, B and G. P3D, P4D and P5D indicate the greatest range of ability level in students in the class, with an equal number of students in all ability bands. This would be the most challenging classes as teachers would have to pursue

a differentiated instructional approach to meet the needs of students across the spectrum of ability. Given the improved proficiency in the students in the upper primary levels, an independent reading programme that allows students to read beyond the text would be ideal.

School 4

Secondary 1

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1FH	4	4	8	23	39
Sec 1GR	15	5	4	1	25
Sec 1HP	16	5	3	3	27
Sec 1JY	20	8	7	2	37
Sec 1LV	1	3	4	32	40
Sec 1PC	18	11	6	4	39
Sec 1PR	12	7	2	0	21
Sec 1TH	7	7	9	17	40
Whole Level	93	50	43	82	**268**

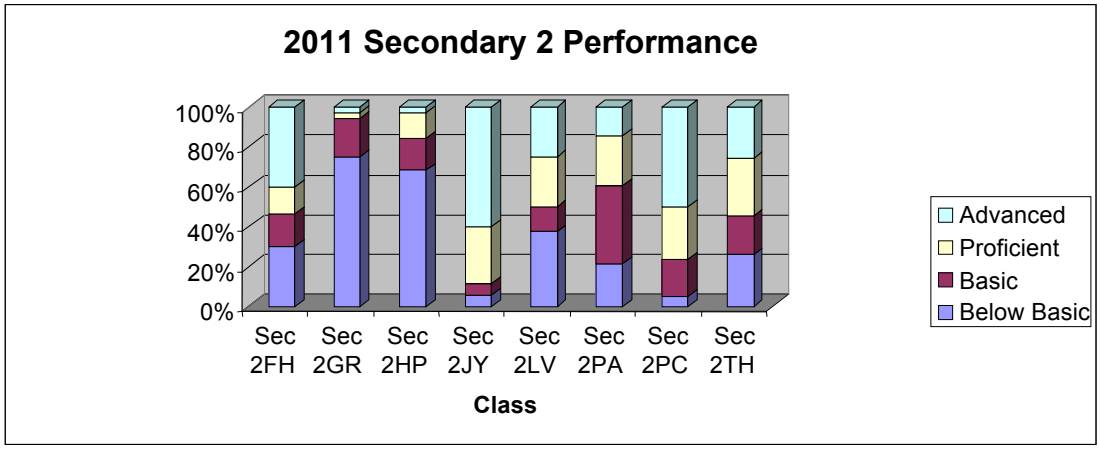


In Secondary 1, the most fluent readers are concentrated in Sec 1FH and 1LV, with 60% and 80% of the respective class reading at an Advanced level. These classes would be able to handle reading resources and materials above the reading level required for Secondary 1, and an Independent Reading Programme with limited teacher intervention could be considered for these two classes. In Sec 1TH, students are split relatively evenly across all the four reading proficiency levels. The instructional strategies to develop reading skills should be carefully considered for this class, as students will require resources at different lexile levels.

The range of skills demonstrated are also quite varied, thus suggesting a differentiated instructional approach may be required for this class. In Sec 1GR, Sec 1HP, Sec 1JY, Sec 1PC and Sec 1PR, a majority of the students are reading at a Below Basic or Basic level of proficiency, which means that students are below the reading proficiency required at Secondary 1. This is an area of concern and needs to be addressed, to arrest any further backsliding in Secondary 2 and 3. An intensive remediation programme would be ideal for the targeted students in these classes, to bring them up to the reading proficiency levels required. In addition there has to be a mindful selection of reading resources for independent reading to ensure that students are appropriately matched according to their skills and ability.

Secondary 2

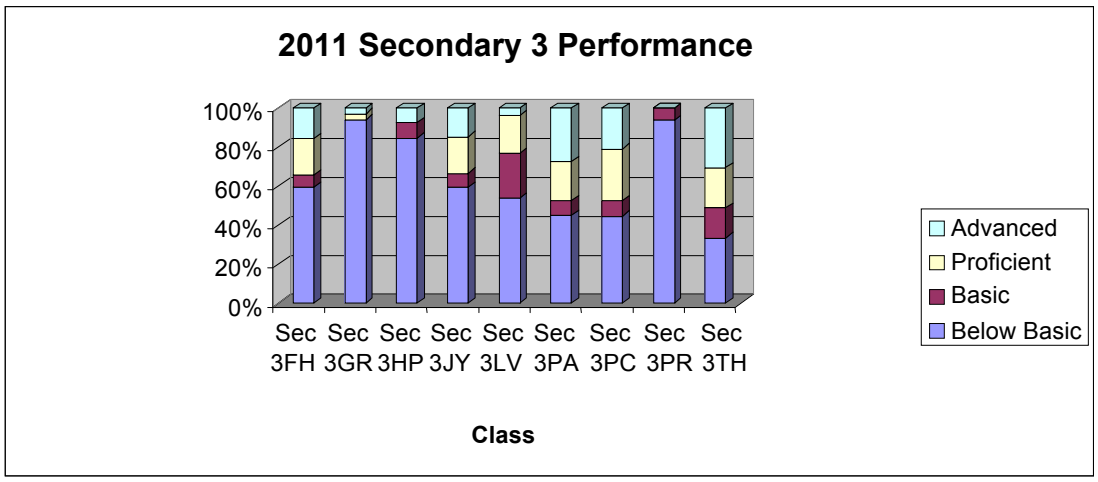
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 2FH	9	5	4	12	30
Sec 2GR	27	7	1	1	36
Sec 2HP	26	6	5	1	38
Sec 2JY	2	2	10	21	35
Sec 2LV	15	5	10	10	40
Sec 2PA	6	11	7	4	28
Sec 2PC	2	7	10	19	38
Sec 2TH	8	6	9	8	31
Whole Level	95	49	56	76	**276**



A pattern similar to Secondary 1 is observed in Secondary 2, with a high concentration of Advanced readers in Sec 2JY and Sec 2PC. However, the difference in observable in the 4 classes, Sec 2FH, Sec 2LV, Sec 2PA and Sec 2TH; where the spread of students across the different reading ability levels is relatively even. This indicates a wide range of skills across the students in these classes, and as such a well designed, differentiated approach to instruction should be adopted to ensure that the needs of all the students are met. A strategy to group students by ability across these four classes could also be considered for a more focussed and targeted instructional programme. The classes of concern are Sec 2GR and Sec 2HP, where close to 80% of the students are reading at Below Basic and Basic proficiency levels. Serious attention needs to be given to review the current instructional approach adopted in the teaching of reading for these two classes. Simultaneously a very rigorous and structured remediation programme should be considered to bring these students up to grade level.

Secondary 3

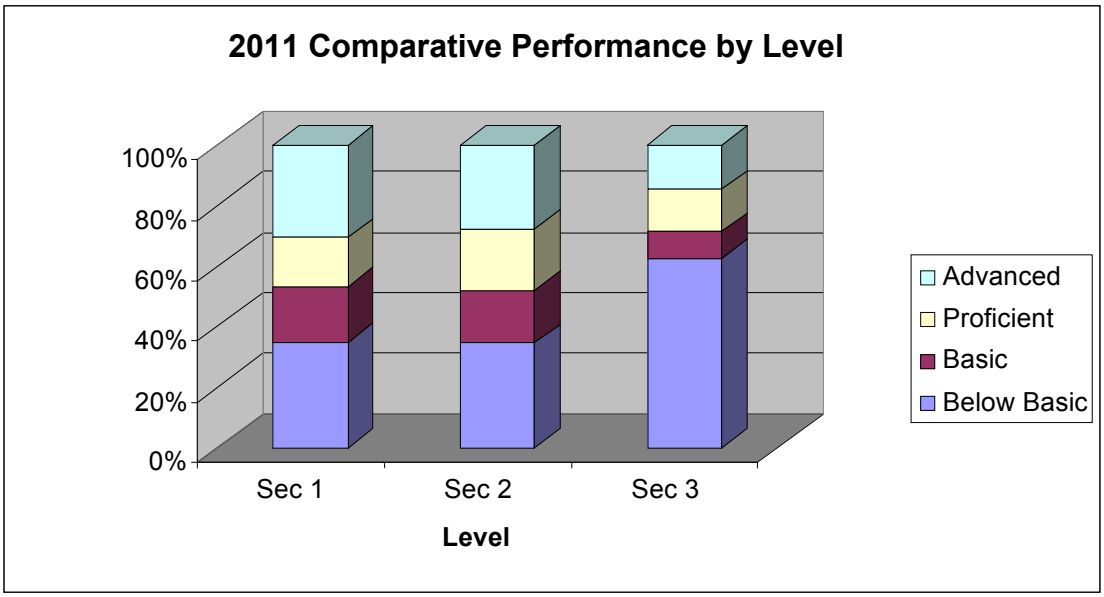
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 3FH	19	2	6	5	32
Sec 3GR	32	0	1	1	34
Sec 3HP	33	3	0	3	39
Sec 3JY	16	2	5	4	27
Sec 3LV	14	6	5	1	26
Sec 3PA	18	3	8	11	40
Sec 3PC	17	3	10	8	38
Sec 3PR	30	2	0	0	32
Sec 3TH	13	6	8	12	39
Whole Level	192	27	43	45	**307**



At Secondary 3 level, an area of significant concern is the large percentage of students reading at Below Basic and Basic levels across all the classes. As these students progress into Secondary 4 in 2012, the GCE 'O' Level examinations may prove to be a significant challenge for these students. Except for Sec 3TH and Sec 3PC, which have an equal mix of reading abilities in the class, serious consideration should be given to the design of an instructional programme that will address the needs of a majority of the students who seem to be falling behind the reading proficiency required at Secondary 3.

Comparative analysis across grade levels

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1	93	50	43	82	268
Sec 2	95	49	56	76	276
Sec 3	192	27	43	45	307
Whole School	380	126	142	203	**851**

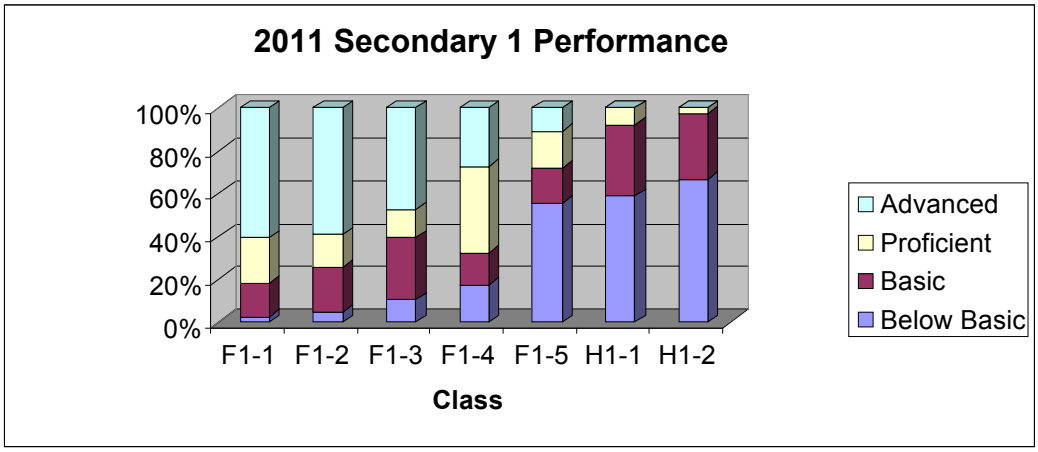


The overall results of the 2011 SRI assessment indicates a wide range of reading fluency levels in each year group as well as across the different year groups. When a year on year comparison is made from Secondary 1 through to Secondary 3, the indication is that the number of students falling into the Below Basic reading profile is growing as they progress through the years. A review of current instructional practices and programmes could be considered to address this issue, and ensure that students are being given sufficient reading materials at the appropriate level of challenge to develop the appropriate reading skills.

School 5

Secondary 1

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
F1-1	1	6	8	23	38
F1-2	2	8	6	23	39
F1-3	4	11	5	18	38
F1-4	7	6	16	11	40
F1-5	10	3	3	2	18
H1-1	23	13	3	0	39
H1-2	26	12	1	0	39
Whole Level	73	59	42	77	**251**

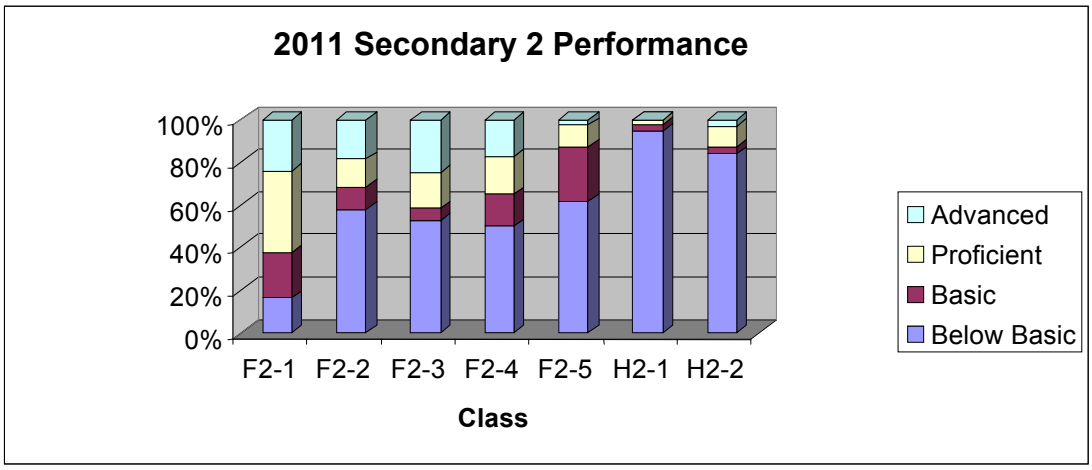


The overall results of the 2011 SRI assessment are quite promising for Secondary 1, especially for classes F1-1, F1-2, and F1-3, where more than 50% of students are reading at an Advanced level, which is above the proficiency required for Secondary 1. Students in these classes would do well, with programmes that enhance their existing skills and stretch their reading capacity. For the small number of students in these classes reading at Below Basic and Basic proficiency, a targeted programme where they are assisted specially outside the regular instructional programme would be ideal to support them to catch up with their peers. In F1-4, students are relatively equally split across all the reading proficiency ranges. It would be useful to consider a differentiated instructional strategy to meet the varied needs of students in this class. Consideration should be given to the selection of reading materials for independent reading to ensure that students have access to books that are appropriately matched to their ability level. In classes F1-5, H1-1 and H1-2, a majority of students are reading at Below Basic and Basic levels. These students

require immediate attention in the form of intensive instruction and remediation where necessary. The choice of classroom reading instructional materials should be carefully considered to ensure that students are able to build the required reading skills, without being overly challenged by the text on-hand.

Secondary 2

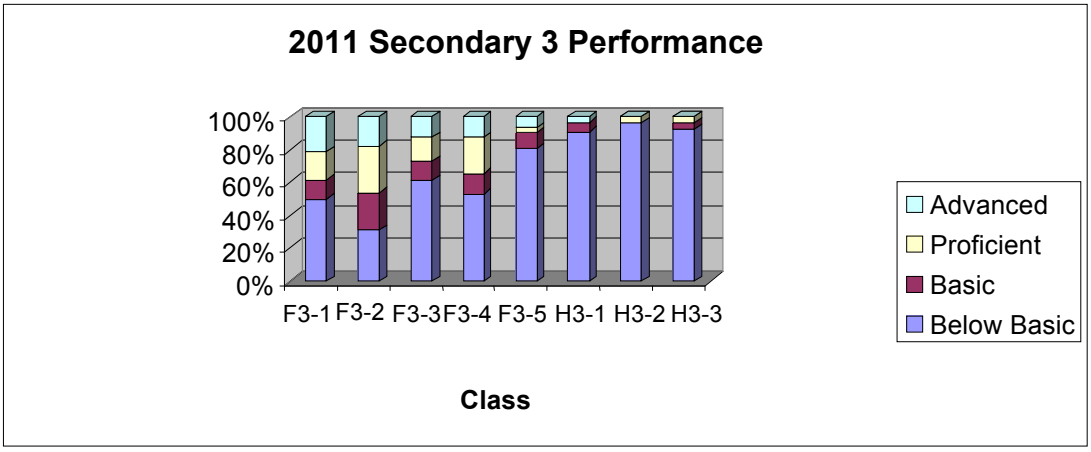
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
F2-1	6	8	14	9	37
F2-2	22	4	5	7	38
F2-3	19	2	6	9	36
F2-4	20	6	7	7	40
F2-5	24	10	4	1	39
H2-1	38	1	1	0	40
H2-2	26	1	3	1	31
Whole Level	155	32	40	34	**261**



The analysis of Secondary 2 tests shows that there is a significant increase in the number of students falling into the Below Basic category of reading proficiency. In fact, coupled with students in the Basic category, they make up 72% of the cohort. This is cause for reflection on what initiatives in literacy practices and instructional design need to be undertaken to remediate the situation.

Secondary 3

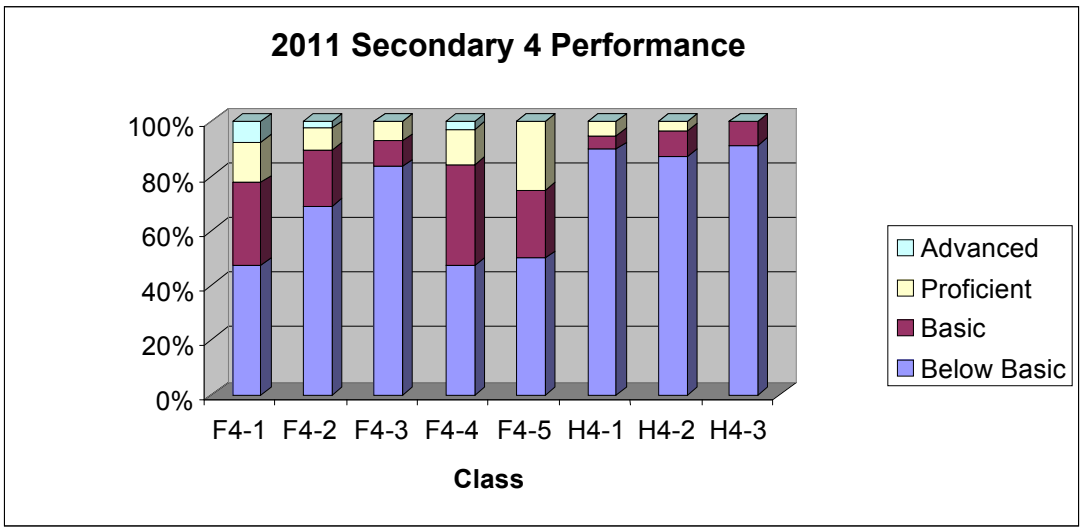
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
F3-1	21	5	7	9	42
F3-2	12	9	11	7	39
F3-3	25	5	6	5	41
F3-4	17	4	7	4	32
F3-5	25	3	1	2	31
H3-1	30	2	0	1	33
H3-2	27	0	1	0	28
H3-3	25	1	1	0	27
Whole Level	182	29	34	28	**273**



In Secondary 3, 77% of students fall in the lower half of the reading proficiency scale. This is an increase over previous years and cause for serious consideration.

Secondary 4

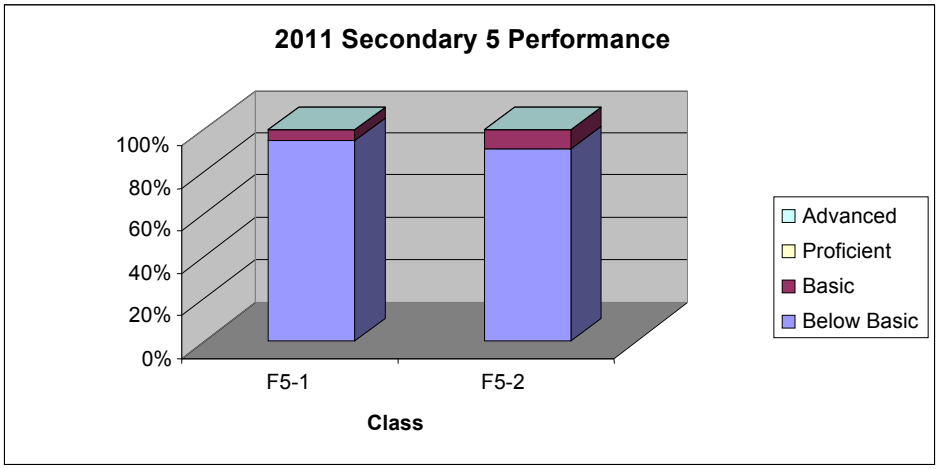
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
F4-1	19	12	6	3	40
F4-2	27	8	3	1	39
F4-3	35	4	3	0	42
F4-4	18	14	5	1	38
F4-5	2	1	1	0	4
H4-1	18	1	1	0	20
H4-2	27	3	1	0	31
H4-3	21	2	0	0	23
Whole Level	167	45	20	5	**237**



In Secondary 4, 90% of pupils fall into the lower half of the reading proficiency scale.

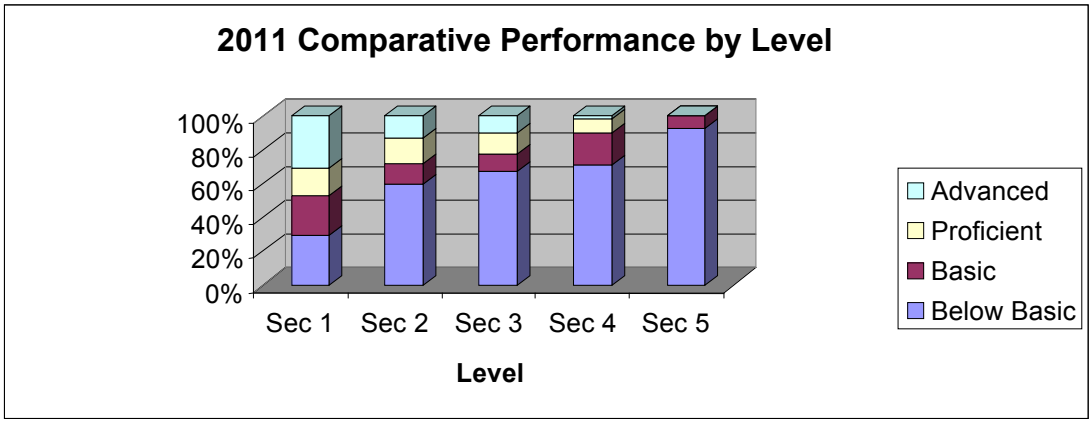
Secondary 5

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
F5-1	17	1	0	0	18
F5-2	20	2	0	0	22
Whole Level	37	3	0	0	**40**



In Secondary 5, the trend observed in prior levels continues with most students falling in the Below Basic proficiency range.

Comparative analysis across grade levels

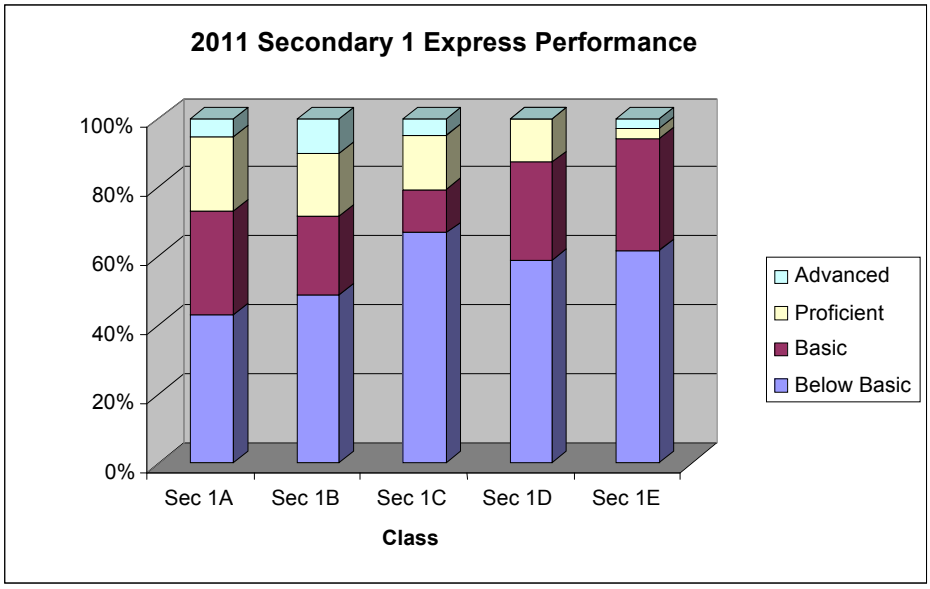


A trend that is observed when reviewing the SRI results for Secondary 2, 3 and 4 is that an increasing number of students in all these levels are falling behind; into the Below Basic and Basic reading proficiency levels in all classes. Assuming that the PSLE intake scores and background of each cohort has remained relatively consistent over the years, this is an area of concern. It seems to indicate that students are struggling to read more challenging texts as they progress into the higher grade levels, meaning that their reading fluency is not improving at the rate required to keep up with the reading resources provided. In Secondary 2, apart from F2-1, more than 50% of students are reading at a Below Basic proficiency level. In Secondary 3, this is also the case for all classes except F3-2. In Secondary 4, in all the classes close to 80% of students are reading at a Below Basic or Basic proficiency level. The initial analysis of SRI results seems to show that students may be falling behind in their reading ability as they progress through their academic programme. A review of current instructional practices and programmes should be considered to address this issue, and ensure that students are being given sufficient reading materials at the appropriate level of challenge to develop the appropriate reading skills. Specially designed, targeted intensive remediation would also be useful in this case to arrest the trend of backsliding.

School 6

Secondary 1

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1A	16	11	8	2	37
Sec 1B	19	9	7	4	39
Sec 1C	26	5	6	2	39
Sec 1D	23	11	5	0	39
Sec 1E	21	11	1	1	34
Sec 1F	29	0	0	0	29
Sec 1G	32	0	0	0	32
Whole School	166	47	27	9	**249**



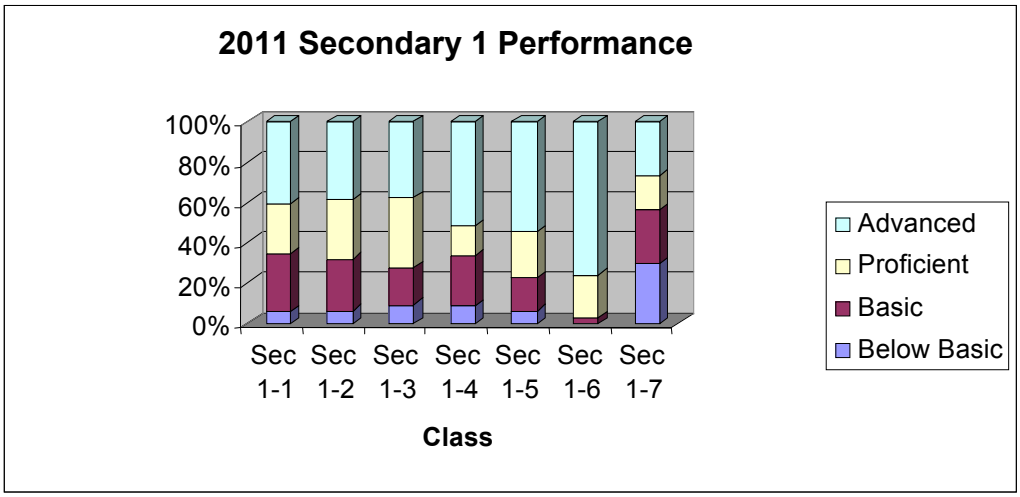
The assessment data for this secondary school shows that close to half of the Secondary 1 cohort for 2011 were reading at a proficiency level below what was required for Secondary 1. About 30% of the cohort were reading within the lexile range required for proficiency and less than 10% were at an Advanced level. This pattern of proficiency was consistent across all the five Secondary 1 classes, with the weakest class being Sec 1E. The results signal the potential risk of a significant number of students falling behind and this would have repercussions in other subject areas as well. The best action moving forward would be an intensive learning support programme at this level to ensure that students move into the Basic level of reading proficiency and stem any possible backsliding in the higher levels. Close attention should also be paid to the selection of reading resources and classroom

instructional materials to ensure that they are on level with students' reading proficiency.

School 7

Secondary 1

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1-1	2	9	8	13	32
Sec 1-2	2	8	9	12	31
Sec 1-3	3	6	11	12	32
Sec 1-4	3	8	5	17	33
Sec 1-5	2	5	7	17	31
Sec 1-6	0	1	7	25	33
Sec 1-7	11	10	6	10	37
Whole Level	23	47	53	106	**229**



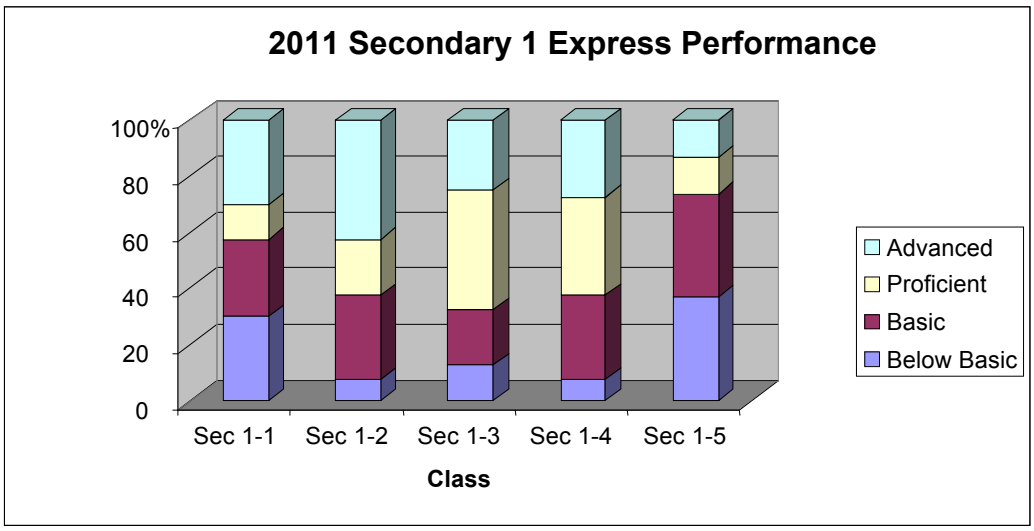
The overall result of the SRI assessment is that 2011 Secondary 1 cohort is reading at high levels of proficiency, with close to 70% reading at the Proficient and Advanced levels. 47% of the 2011 Secondary 1 cohort are reading at a level above what is required at Secondary 1, indicating that teachers are able to use resources for in-class instruction which challenge students beyond what is determined for Secondary 1. In terms of developing Independent Reading Programmes, readers that are above the determined Secondary 1 standard should be selected as a majority of students are reading on-level and above-level. Sec 1-5 and Sec 1-6 are the academically most able classes, and there should be serious consideration given to

designing learning programmes which stretch students. The percentage of students who are reading below level is very small, and mostly concentrated in Sec 1-7, as such an intensive after-school support programme for targeted students to bring them on-level would be more ideal as opposed to a separate in-class differentiated instructional programme.

School 8

Secondary 1

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1-1	12	11	5	12	40
Sec 1-2	3	12	8	17	40
Sec 1-3	5	8	17	10	40
Sec 1-4	3	12	14	11	40
Sec 1-5	14	14	5	5	38
Sec 1-6	25	8	4	2	39
Sec 1-7	32	2	0	1	35
Whole Level	94	67	53	58	**272**



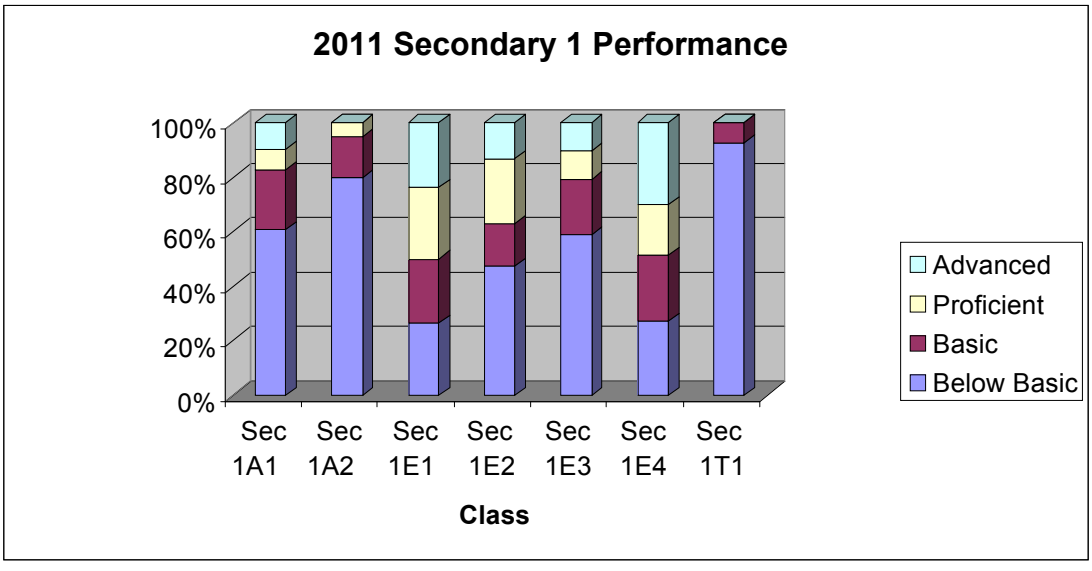
For a school in a developing neighbourhood, the assessment data was encouraging for teachers at this secondary school as it revealed that the incoming Secondary 1 cohort for 2011 had relatively high level of reading proficiency. 40% of the cohort is in the upper level or beyond proficiency required at Secondary 1. These students are spread across all five Secondary 1 classes. Nevertheless a significant number at 35%

are also reading at a Below Basic level concentrated in Sec 1-1 and Sec 1-5. For this school the focus on a differentiated approach to instruction would be ideal given the significant range in reading proficiency levels in each class. This would allow teachers to cater to the needs of all the students in the different ability groups. In addition, a separate enrichment or learning support programme should be considered for targeted students in the Below Basic proficiency group.

School 9

Secondary 1

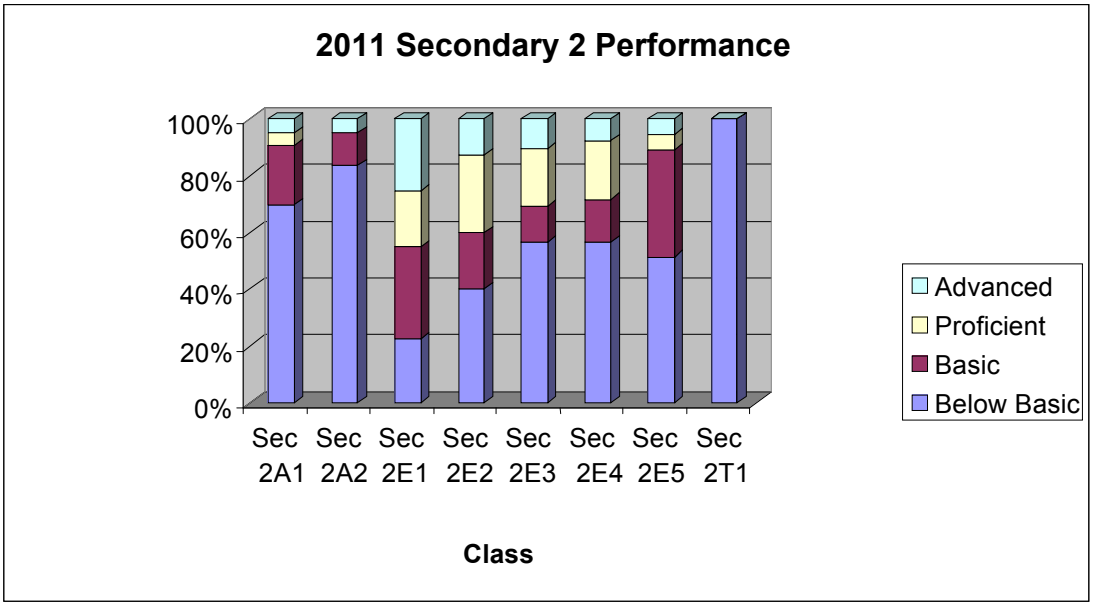
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 1A1	25	9	3	4	41
Sec 1A2	32	6	2	0	40
Sec 1E1	10	9	10	9	38
Sec 1E2	18	6	9	5	38
Sec 1E3	23	8	4	4	39
Sec 1E4	10	9	7	11	37
Sec 1T1	37	3	0	0	40
Whole Level	155	50	35	33	**273**



The Secondary 1 assessment data reveals that 56% of the cohort is reading at a level below what is required. These students are relatively evenly spread out across all the Express classes, from Sec 1E1 to Sec 1E4. Only about 24% of the cohort is reading on grade level.

Secondary 2

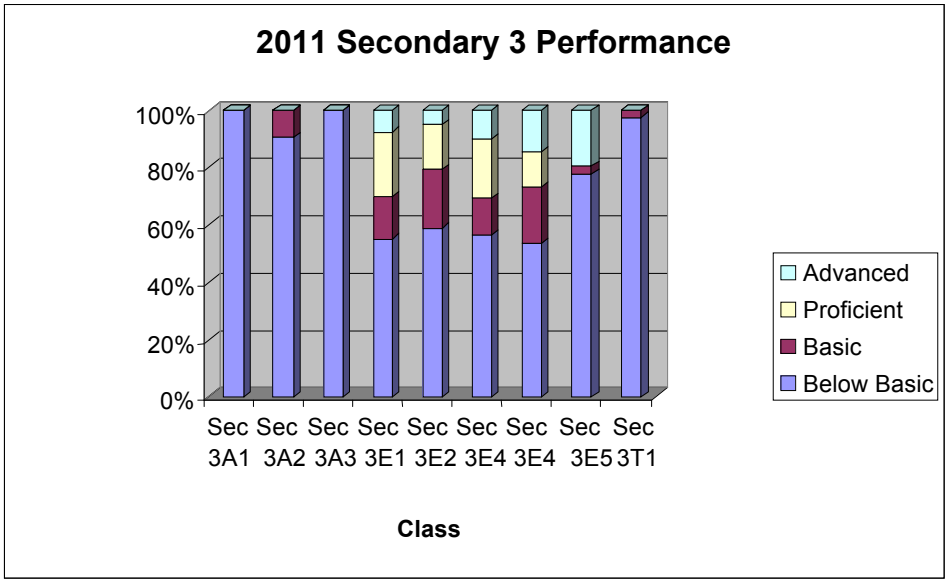
Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 2A1	30	9	2	2	43
Sec 2A2	36	5	0	2	43
Sec 2E1	9	13	8	10	40
Sec 2E2	16	8	11	5	40
Sec 2E3	22	5	8	4	39
Sec 24	22	6	8	3	39
Sec 2E5	19	14	2	2	37
Sec 2T1	36	0	0	0	36
Whole Level	190	60	39	28	**317**



The data for Secondary 2 performance is discussed together with that for Secondary 3 below.

Secondary 3

Class	Below Basic	Basic	Proficient	Advanced	Total Number of Students
Sec 3A1	32	0	0	0	32
Sec 3A2	19	2	0	0	21
Sec 3A3	28	0	0	0	28
Sec 3E1	22	6	9	3	40
Sec 3E2	23	8	6	2	39
Sec 3E3	22	5	8	4	39
Sec 3E4	22	8	5	6	41
Sec 3E5	28	1	0	7	36
Sec 3T1	39	1	0	0	40
Whole Level	235	31	28	22	**316**



The results for this neighbourhood school indicate the need to review the efficacy of the current instructional model and learning support programmes. Given that the PSLE intake scores on each cohort were quite similar, the SRI data presents a scenario where students' reading proficiency is falling behind in each subsequent year. The results of the Secondary 2 cohort indicate that 59% are reading at a Below Basic level and this increases to 74% in Secondary 3. There also seems to be difficulty in sustaining students who are reading above grade level with the percentage decreasing from 12% in Secondary 1 to 8% in Secondary 2 and 7% in Secondary 3. It would be ideal for this school to focus on designing a strong reading and language foundation programme in the lower secondary years to ensure that students are

able to meet the challenge of the GCE 'O' levels. In addition, a highly structured and supported levelled reading programme would be the recommended approach to promote independent reading. The key for this school is to move a high proportion of students from the Below Basic into the Basic and Proficient category in the lower secondary years and then focus on sustaining their proficiency in the upper secondary years.

Applications of Scholastic Reading Inventory

The ability to develop an effective instructional programme for learning English and to select reading resources that match appropriately to the students' reading fluency levels has taken on greater significance in an environment where reading fluency is positively correlated to academic achievement. Students need to be able to read across subject areas and effectively apply comprehension skills that they have learnt in the language classroom. It is within this context that SRI and the Lexile Framework for Reading provide educators an opportunity to gain appropriate information and design relevant reading and English language instructional programmes to meet the needs and abilities of their students.

One of the most useful deliverables of SRI is that critical student assessment data is captured, analysed and presented in reports that allow educators to track reading comprehension progress of individual students, groups, classes and at whole-school level for specified time periods. This enables educators to critically review and analyse instructional practices and fine tune them to meet the needs of specific students and groups of students. It allows them to engage more effectively in differentiated instruction and assessment as they develop instructional programmes and materials. The table on the next page provides an overview of all the SRI reports by type and the functions that it serves.

School Level	
Proficiency Growth Report	To note changes in distribution across performance standards over time
Proficiency Summary Report	A graph showing overall reading performance for the school
School Proficiency Report	To view SRI performance standards for the school
Test Activity Report	To view and compare data on test activity in different classes in the school
Teacher Roster	To view the student test-taking data by teacher

Class Level	
Growth Report	To assess Lexile growth for a group or a class between two test dates
Incomplete Test Alert	To identify students who are struggling with SRI
Proficiency Report	To compare performance standards for a group or a class
Reading Performance Report	To view current Lexile scores and performance standards for a group or class
Targeted Reading Report	To view reading ranges for leveled instructional materials for a group or class

Student Level	
Read for Life Report	To view Lexile scores in relation to real-world texts of varying types and difficulty
Recommended Reading Report	To view a list of recommended books based on a student's reading interests and level
Student Action Report	To group students based on SRI test history and reading levels
Student Progress Report	To view cumulative SRI results for a student
Student Test Printout	To review a student's answers on one SRI test
Student Yearly Progress Report	To track a student's Lexile measures over time
Parent Report I & II	To introduce SRI to parents, summarise results of the student's testing session, and offer suggestions for how parents can help build fundamental reading skills at home

When used as an assessment tool, SRI provides specific data based on individual abilities. Current standardised reading comprehension tests draw from standardised tests and grade level reading texts to measure fluency. These types of tests deliver the same test items to every student regardless of a student's current reading ability. These types of tests cannot provide accurate indicators of reading comprehension levels, as all students are not starting at the same level. Hence the accuracy of the scores and its use as a tool to guide instruction do not take into account the existence of differentiated abilities in the classroom. When Lexile measures are used to compare students' reading abilities to reading materials, it allows for adjustment of the readers' expected comprehension level and leads to successful individualised reading experiences through targeted instruction and intervention programmes.

Adopting SRI as a core assessment tool will enable educators to take into account the differences in ability that affect the accuracy of a student's score. It will provide a much more accurate indicator of students' reading proficiency as it uses a common, absolute scale to measure text readability and student reading ability. For teachers and educators it provides the opportunity to track students' progress and assign appropriate reading materials using a systematic, structured and standardised approach.

The analyses in this paper show that using SRI assessment to benchmark reading fluency is useful for all schools. The range of schools is indicative of the benefits that SRI can provide in different educational settings to achieve a range of instructional and learning outcomes.

This paper presents a brief analysis of the reading proficiency levels of students in various schools at the time of the first administration of the SRI assessment tool. It enables teachers to understand the reading level and needs of each student and at the same time understand the reading profile of the class as a whole. The teacher will be able to make informed decisions with regard to classroom instructional strategies and materials, classroom management and intensive and extensive reading requirements. The data will influence the choice of texts and instructional materials as well and the reading and language learning instructional approach. Across the level, the level head and teachers of the level will be able to see the spread of students and determine differentiation and collaborative strategies particularly with regard to intervention/ remediation and enrichment. Decisions can be made about the allocation of teachers to particular classes based on the reading profile and needs as well as the division of students into the various classes. At a whole school level then, a profile of the reading proficiency is created and the Head of Department together with the faculty is able to make better informed decisions about instructional programmes, reading programmes and library materials.

When the SRI assessment is administered consistently and at fixed intervals, reports generated will indicate the reading progress of a student within that grade level and across grades as they progress through primary/ secondary school. Consistent and skilful application of the results of SRI assessments will assist the teacher in providing high-quality instruction and targeted interventions that match students' needs by providing systematic, data-driven processes for determining if implemented strategies are working for each student. SRI can support school-, cluster- and nation-wide reading proficiency initiatives by serving as a universal screener, placement tool, and progress monitor for all students at class-, school-, cluster- and nation-wide levels. Using the reports, teachers can determine whether intensive individual intervention, targeted small group instruction or a core instructional programme, or a mix of all three would be most effective for each student.

The results of SRI are reported on a developmental scale that is interpretable across grade levels, making it a useful tool for accurately establishing students' initial reading comprehension levels and monitoring their growth throughout the year. Teachers can use SRI to individualise students' learning experiences and help ensure that they become motivated and successful readers.

While teachers typically have a good understanding of what students are expected to know and be able to do in order to demonstrate basic grade-level reading proficiency, they may not always have timely or accurate information to help individual students develop their reading skills. Moreover, because teachers may differ in their approach to reading instruction — both basic reading instruction and remedial interventions — they are often in need of a measure that provides precise, useful information about reading ability that is aligned with end-of-year measures and is more or less neutral with respect to their chosen approach to reading instruction.

As more schools get on SRI assessment, more data will be fed in regarding desired proficiency levels for Singapore using Singaporean instruments of measurement (school examination papers and so on). The test will then get more and more precisely calibrated to provide results and information that will be completely suited to the Singapore context and desired outcomes of English Language Learning. This in turn will lead to more informed and more effective decisions about instructional design, materials and practice in the classroom and reading materials in the library and for extensive reading.

Conclusion

The data presented and analysed in this paper shows that the SRI assessment tool can be used to identify students in need of assistance, effectively guiding instructional interventions early in the school year. With access to an effective classroom assessment tool that produces a metric that describes both the complexity of text and student reading comprehension, and that is related to expressed achievement levels, teachers can:

1. Align instructional materials to state standards and scaffold student comprehension instruction.
2. Establish realistic, informed student achievement growth goals based on students' initial reading comprehension levels.
3. Monitor an instructional plan to help students at all levels demonstrate proficiency in meeting reading standards.

In other words, teachers using SRI will be able to obtain the data they need throughout the year to monitor student progress, set goals according to reading level, and adjust instruction appropriately. Teachers can start thinking about reading proficiency in an objective manner, set goals and monitor performance, craft initiatives suited to their students' reading proficiency profiles and evaluate their effectiveness. Most importantly, implementing SRI will support every school's goal of ensuring that all students achieve reading success.

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