Chapter Three

Patterns and Trends in Achievement: First Language – Sinhala 2015

3.1   Introduction

This chapter presents the patterns and trends in achievement of the students in Sinhala language.

The patterns of achievement in 2015 will be presented in part I and the trends will be presented in part II.

Part I – Patterns in achievement in First Language - Sinhala

First, national level student achievement would be discussed in relation to student performance pertaining to Sinhala language.

3.2   Patterns of achievement at national level

National level student achievement would be discussed first in relation to student performance pertaining to Sinhala language.
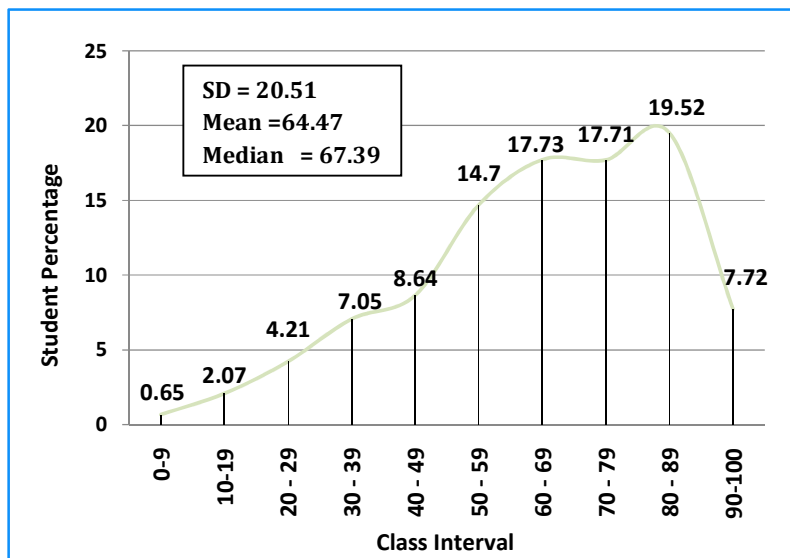
Fig. 3.1: All island achievement in Sinhala language 2015 – dispersion of marks

The frequency polygon shown in Fig. 3.1 outlines the total picture of the distribution of marks of grade 04 students in the Sinhala language.

Fig. 3.1 depicts a negatively skewed distribution of marks displaying that majority of the students has scored high marks in the Sinhala language.

The dispersion of marks is further explained in the cumulative percentage Table 3.1 given below.
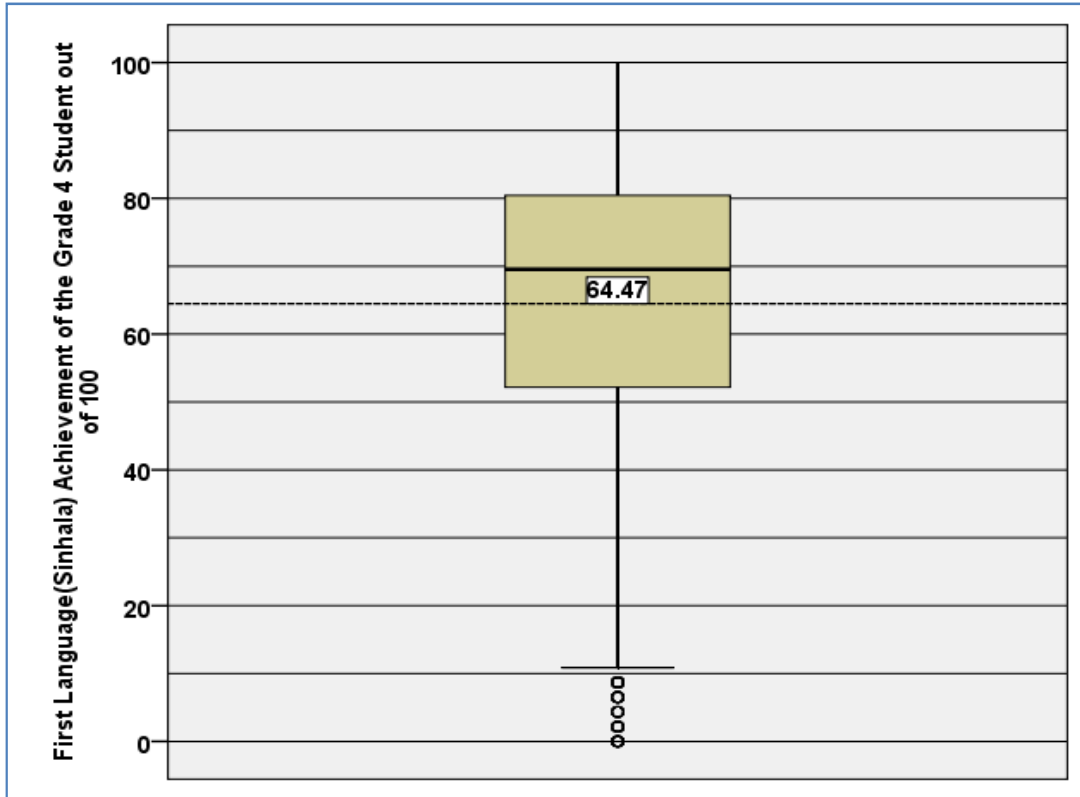
Table 3.1: All island achievement in Sinhala language 2015– cumulative percentages

Class Interval	Student %	Cumulative %
0 –9	0.65	0.65
10 - 19	2.07	2.73
20 - 29	4.21	6.94
30 - 39	7.05	13.99
40 - 49	8.64	22.62
50 - 59	14.70	37.33
60 - 69	17.73	55.06
70 - 79	17.71	72.77
80 - 89	19.52	92.28
90 - 100	7.72	100.00
Total	100.00	

Approximately 13.99% of students has obtained marks below 40 marks. On the other hand, the highest percentage of students (19.52%) has scored between 80-89. However, the number of students who has scored above 90 marks is only 7.72%.

Fig. 3.2 illustrates student achievement patterns further.

As Fig. 3.2, the box plot displays more than 50% of students has reached 64.47 mark level. Further, 75% of students has scored up to 80. Majority of the students' marks are between 50 and 80. However, there are few students who have scored very low marks and below the range of the others. Hence they are considered as outliers.

Fig. 3.2: Box plot and whisker chart representing all island Sinhala language achievement

Summary of national level achievement

- National level mean is 64.47, while the median is 67.39.
- Disparity in achievement prevails with approximately 13.99% of students scoring below 40% and 19.52% of students scoring between 80-89 marks. However, there are also a few outliers those whose marks are very low compared to others.

Provincial wise student achievement will be discussed next.

3.3   Provincial wise student achievement

The nature of the distribution of scores provincial wise reveals certain patterns. First these patterns pertaining to the Sinhala language are discussed using Table 3.2.

Table 3.2: Provincial achievement in Sinhala language 2015 – Summary statistics

Province	Mean	Rank	Standard Error of Mean	Standard Deviation	skewness	Percentile (p25)	Median (p50)	Percentile (p75)
North Western	67.54	1	0.11	20.88	-0.66	52.17	71.74	84.78
Sabaragamuwa	66.62	2	0.12	19.88	-0.61	52.17	69.57	82.61
Southern	66.04	3	0.1	19.67	-0.65	52.17	69.57	80.43
Northern	64.36	4	0.48	17.81	-0.71	52.17	67.39	78.26
North Central	64.34	5	0.14	19.84	-0.54	52.17	67.39	80.43
Western	63.10	6	0.08	21.33	-0.57	47.83	67.39	80.43
Uva	62.57	7	0.16	19.99	-0.49	50.00	65.22	78.26
Central	61.96	8	0.12	19.85	-0.57	50.00	65.22	78.26
Eastern	60.13	9	0.23	20.19	-0.37	45.65	60.87	76.09
All Island	**64.47**		**0.04**	**20.51**	**-0.58**	**50.00**	**67.39**	**80.43**

As Table 3.2 indicates based on provincial wise mean achievements North Western Province ranks first and its mean value is above the all island value as well.

Achievement wise the provinces fall into three main categories. North Western, Sabaragamuwa and Southern, with mean scores above the national mean, fall into the higher category.

Northern and North Central Provinces means are just below the all island mean. Western, Uva, Central and Eastern Provinces are below the national mean but above 60 points.

 These disparities are further highlighted through the bar chart given in Fig. 3.3.
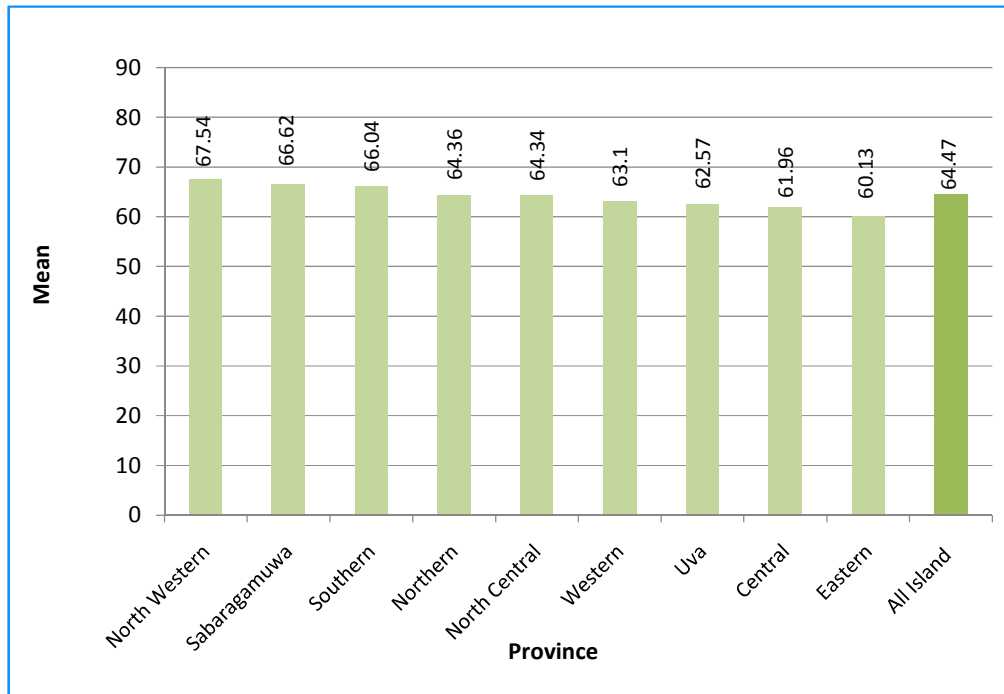
***Fig. 3.3: Bar chart to represent mean among the provinces- Sinhala language***

Disparity in achievement among provinces

Standard Deviation (SD) indicates how marks deviate from the mean. The national SD is 20.51. Except for the Northern Province in all the other provinces the SD varies from the national SD by only 1 point. SD is lowest in the Northern Province indicating that the variation from mean is less. SD is highest in the Western Province indicating high variation in achievement.

All the provinces have obtained negative skewed values. This means that majority of the students in these provinces has scored high marks. It is a positive sign that higher number of provinces has achieved higher values (near to the mean or above). This has contributed to the all island skewness value to be negative.

On the other hand Uva and Eastern Provinces skewness value is low indicating that there are more low achievers.

Fig. 3.4, the box plot graphically illustrates this diversity further.
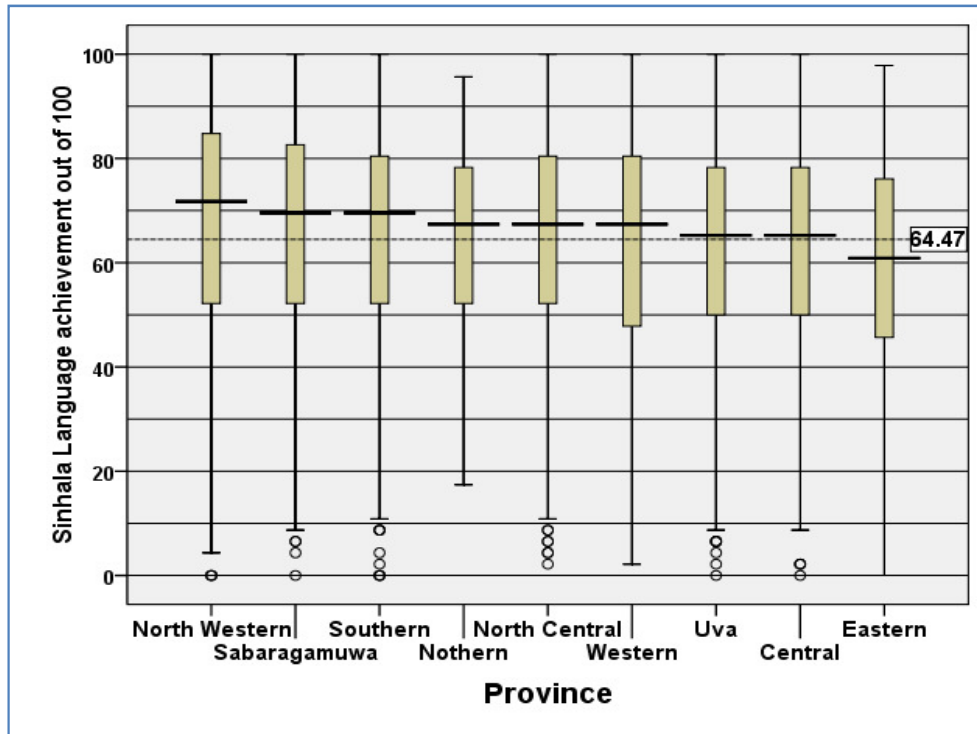
Fig. 3.4:   Box plot and whisker chart representing provincial wise Sinhala language achievement

Except for Eastern and Western Provinces the all island 25th percentile is equal to 50 or above. This is a positive sign. It indicates that more than 75% of the student sample is above the 50 marks point.

It is interesting to note that several provinces have similar median scores. The North Western Province has the highest value of 71.74. While Sabaragamuwa and Southern Provinces have the second highest median of 69.57, Northern, North Central and Western Provinces have median values of 67.39. While Eastern Province has the lowest median of 60.87, Uva and Central also have similar median values of 65.22.

The highest 75th percentile score has been obtained by the North Western Province indicating its overall high performance. Southern, North Central and Western Provinces' 75th percentile values are equal to the all island 75th percentile value. Eastern Provinces' 75th percentile is the lowest. An interesting finding is that even then there are no outliers in the Northern and Eastern provinces. In all other provinces there are outliers whose

performance does not fit into the general dispersion of marks of the province. However, there are no students who have performed exceptionally well and above the mark range of the province.

Table 3.3 provides the provincial wise percentage of students scoring 50 or above marks.

Table 3.3: Percentage of students scoring 50 or above, and below 50

Province	Above or equal to 50	Below 50
Southern	81.95%	18.05%
North Western	81.15%	18.85%
Sabaragamuwa	80.96%	19.04%
North Central	79.63%	20.37%
Northern	78.90%	21.10%
Central	78.15%	21.85%
Uva	78.02%	21.98%
Western	77.01%	22.99%
Eastern	72.08%	27.92%
All Island	79.46%	20.54%

The above details confirm that Southern, North Western and Sabaragamuwa are the three highest performing provinces.

Summary of provincial level analysis

- Achievement wise the provinces fall into three categories.

  Category 1 – North Western, Sabaragamuwa and Southern, with mean scores above the national mean (64.47)

  Category 2 –Northern, and North Central cluster in the middle slightly below the national mean.

  Category 3 – Western, Uva, Central and Eastern are the lowest performing Provinces and are below the national mean.

- Disparity of marks within a province is highest in the Western Province.

- In the Northern Province the disparity of marks is less. Therefore, achievement is more homogeneous within the province.

Achievement levels in relation to the types of school would be discussed next.

3.4   Achievement levels by type of school

Table 3.4: Sinhala language achievement according to school type

School Type	Mean	Standard Error of Mean	Standard Deviation	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
1AB	68.72	0.08	18.57	-0.79	56.52	71.74	82.61
1C	61.50	0.09	20.40	-0.43	47.83	63.04	78.26
Type 2	60.05	0.08	21.54	-0.38	43.48	63.04	78.26
Type 3	67.98	0.07	19.58	-0.74	56.52	71.74	82.61
All Island	64.47	0.04	20.51	-0.58	50.00	67.39	80.44

As Table 3.4 indicates there is not a considerable gap between the mean scores of 1AB and Type 3 schools. On the other hand, Type 2 and 1C school types' mean values are quite similar and below the national mean. Therefore, while the gap between 1AB and Type 3 schools' achievement is narrowing the gap between these schools and Type 2 and 1C seems to widen.

The difference in mean scores is graphically shown in Fig. 3.5.
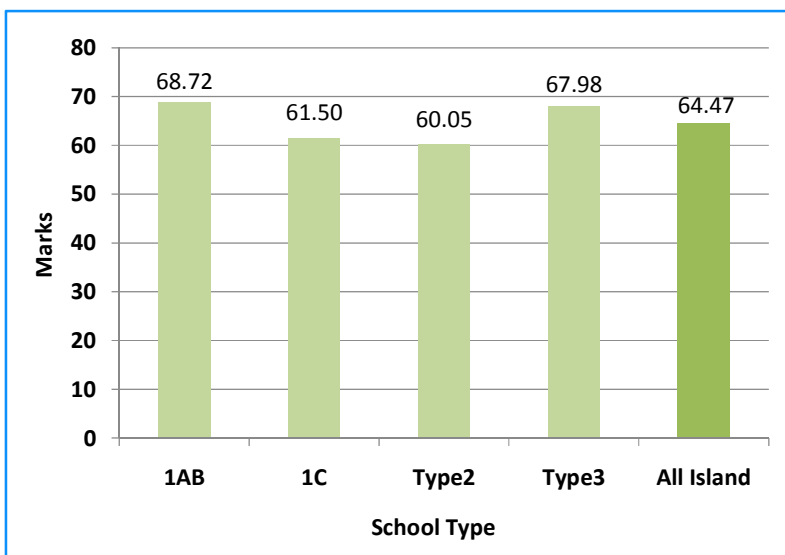
Fig. 3.5: Bar chart representing the mean among the school types - Sinhala language

The performance of the school types is further highlighted when the median scores are considered in Table 3.4. 1AB and Type 3 schools have achieved high median values for the achievement in the Sinhala language and they are identical and above the national value. On the other hand, Type 2 and 1C schools have also obtained identical median values and it is lower than the all island median value (67.39).

Variation among students

Variation in student achievement in 1AB school type is the lowest. The lowest standard deviation value is shown by 1AB schools (18.57). The SD values of both 1AB and Type 3 schools are lower than the all island SD value. It reveals that higher number of student achievement lies closer to the mean value. On the other hand, the SD value is highest in Type 2 schools and is higher than the all island value.

Disparity in achievement

All school types have obtained negative skewed values. It reveals that in all school types higher number of students has achieved high marks while lower marks are obtained by a lower number of students. Highest skewed value has been obtained by the 1AB schools. Next higher value has been obtained by Type 3 schools. This indicates that the majority of marks are closer to the mean. Both values are above the all island skewness value. Lowest negative skewed value has been obtained by Type 2 schools and the next lowest is in 1C schools. Thus the majority of the students' marks deviate from the mean.

The similarities and differences of student performance in different types of schools is further highlighted through the frequency distribution graphs.
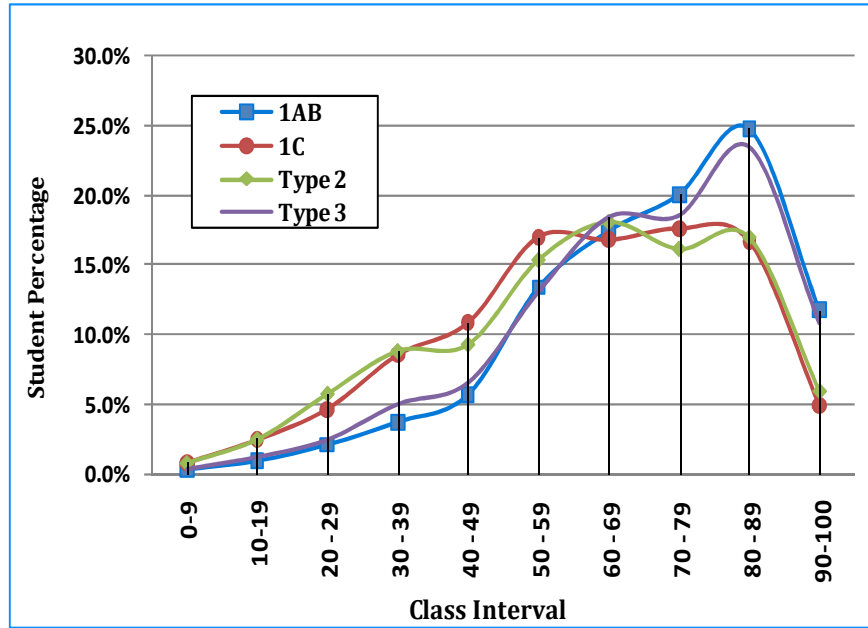
Fig. 3.6:   Dispersion of marks by school type – Sinhala language

As Fig. 3.6 displays, in the 1AB curve the high performing students' marks are spread between 70-100 marks. Similar pattern is indicated in Type 3 schools. Both curves peak at 80-89 marks range indicating that there are groups of high achievers. Their performance is above the performance of the other two school types. This explains the high negative skewness value of these two types of schools.

On the other hand, in Type 2 schools the highest peak is at 60-69 class interval and 1C curve peak at 70-79 class interval.

These performance patterns are further elaborated through the spread of marks at different mark intervals illustrated in the cumulative percentage table.

Table 3.5: Cumulative student percentages according to school type - Sinhala language

Class Interval	1AB		1C		Type 2		Type 3	
	Student %	Cumulative %	Student %	Cumulative %	Student %	Cumulative %	Student %	Cumulative %
0 - 9	0.25	0.25	0.78	0.78	0.79	0.79	0.33	0.33
10 - 19	0.87	1.12	2.43	3.22	2.49	3.28	1.21	1.55
20 - 29	2.04	3.16	4.65	7.87	5.77	9.05	2.46	4.00
30 - 39	**3.66**	**6.82**	**8.52**	**16.38**	**8.85**	**17.91**	**5.01**	**9.01**
40 - 49	5.65	12.47	10.82	27.21	9.33	27.23	6.55	15.56
50 - 59	13.38	25.85	16.95	44.15	15.42	42.65	13.08	28.64
60 - 69	17.46	43.31	16.73	60.89	18.14	60.79	18.45	47.09
70 - 79	20.10	63.41	17.56	78.44	16.21	77.00	18.57	65.66
80 - 89	24.83	88.24	16.64	95.09	17.04	94.03	23.51	89.17
90 - 100	11.76	100.00	4.91	100.00	5.97	100.00	10.83	100.00
Total	100.00		100.00		100.00		100.00	

As shown in Table 3.5, the highest percentage of students' marks (24.83%) in 1AB schools and Type 3 (23.51%) fall within the class interval 80-89. On the other hand, in 1C schools the highest percentage of marks, falls within the class interval 70-79. However, almost equal percentage of student marks is also spread between the class intervals of 50-59 and 80-89. In Type 2 schools the highest percentage of marks falls within 60-69. However, the high marks are spread from 60-69 up to 80-89.

However, in all school types higher percent of students' marks falls between 60-89 and the percentage of low achievers is comparatively less.

The above table illustrates that the gap between 1AB and Type 3 schools are narrowing, the gap between these schools and 1C and Type 2 is widening. However, in all the school types the percentage of high achievers is increasing.

This pattern is further illustrated through the box plot.
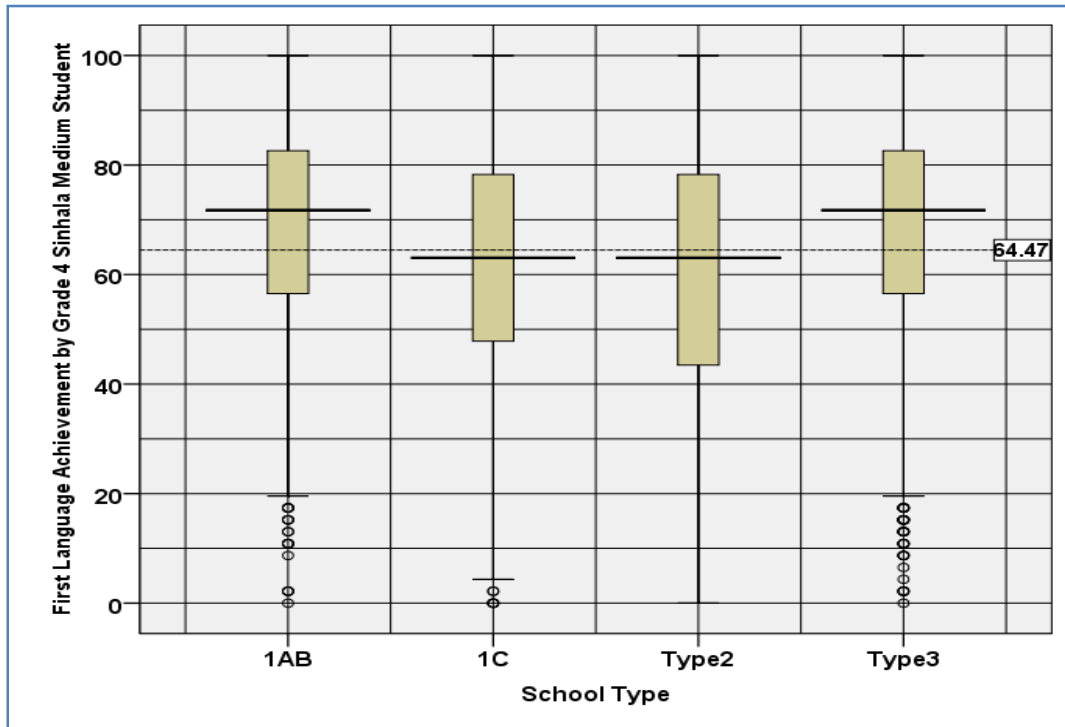
Fig. 3.7: Sinhala language marks according to school types using box plot and whisker plot

As the box plot graph indicates the 25th percentile in 1AB and Type 3 schools are above 50 and in the other two school types it is less and the lowest is in Type 2 schools. Yet, in Type 2 schools there are no outliers. However, in all the other school types there are outliers, On the other hand, at the 75th percentile there is not much variation among the school types.

In spite of this high performance there are no exceptionally high performers or outliers.

Summary

- The achievement in Sinhala language in 1AB schools is the highest (68.72). 1AB and Type 3 schools performance is relatively similar and above the national mean (64.47).

  On the other hand, 1C and Type 2 schools performance is similar and below the national mean.

- The gap in achievement between 1AB and Type 3 schools appears to be narrowing. On the other hand, the gap between the 1AB and Type 3 and Type 2 and 1C is widening.

3.5   Achievement levels by gender

Table 3.6:   Sinhala language achievement according to gender

Student Gender	Mean	Standard Error of Mean	Standard Deviation	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Male	60.72	0.06	20.96	-0.41	45.65	63.04	78.26
Female	68.42	0.06	19.25	-0.77	56.52	71.74	82.61
All Island	64.47	0.04	20.51	-0.58	50.00	67.39	80.43

There is a difference in the achievement of females over males. As Table 3.6 indicates, male performance is also lower than the all island mean score, while female performance is above the all island mean.

These differences could also be seen in Fig. 3.8
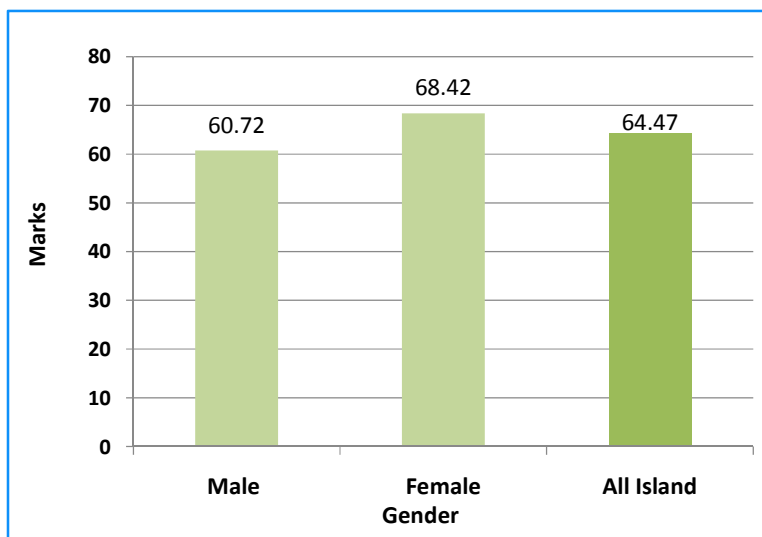
Fig. 3.8: Bar chart representing mean values according to gender – Sinhala language

Variation among students

There is not much variation in achievement among males and females as the SD values are quite similar. However, the skewness value of the females is higher than the males indicating that there are more high achievers among the females.

Fig. 3.9 graphically illustrates the dispersion of marks according to gender.
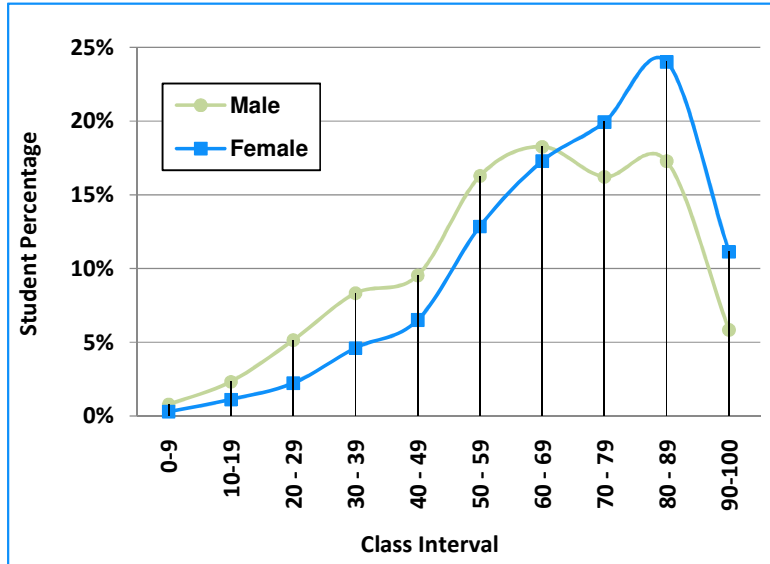
Fig. 3.9: Dispersion of marks by gender – Sinhala language

Disparity in achievement

Fig. 3.9 displays two curves which are both negatively skewed. As can be seen there are more high achievers than low achievers among both males and females. Pattern of the two curves are almost similar at the beginning, then the curves become different and finally, both curves become similar again.

However, the female curve peaks at a higher point indicating that there are more high achievers among the females. On the other hand, the highest percentage of male students falls into 60-69 mark range.

The disparity in the male students' achievement can be elaborated better through the cumulative percentages.

Table 3.7: Cumulative student percentages according to gender –Sinhala language

Class Interval	Male		Female	
	Student %	Cumulative %	Student %	Cumulative %
0 - 9	0.78	0.78	0.28	0.28
10 - 19	2.33	3.11	1.13	1.41
20 - 29	5.14	8.25	2.22	3.63
30 - 39	**8.33**	**16.58**	**4.62**	**8.26**
40 - 49	9.53	26.11	6.50	14.76
50 - 59	16.28	42.39	12.86	27.63
60 - 69	**18.27**	**60.66**	**17.29**	**44.91**
70 - 79	16.23	76.89	19.93	64.84
80 - 89	**17.28**	**94.16**	**24.01**	**88.85**
90 - 100	5.84	100.00	11.15	100.00
Total	100.00		100.00	

According to Table 3.7 and Fig. 3.9 it could be concluded that, there are more high performing female students than male students. The highest percentage (24.01%) of female students' fall into the class interval 80-89. On the other hand, the highest percentage of male students, (18.27%) falls into the class interval 60-69.

Even though, there are only 8.26 cumulative percent of female students who has scored below 40 marks, there are 16.58% of male students who has scored less than 40 marks. Therefore, the overall achievement in Sinhala of the boys is lower than the girls.

Box plot and whisker for gender wise Sinhala language achievement elaborate the performance further.
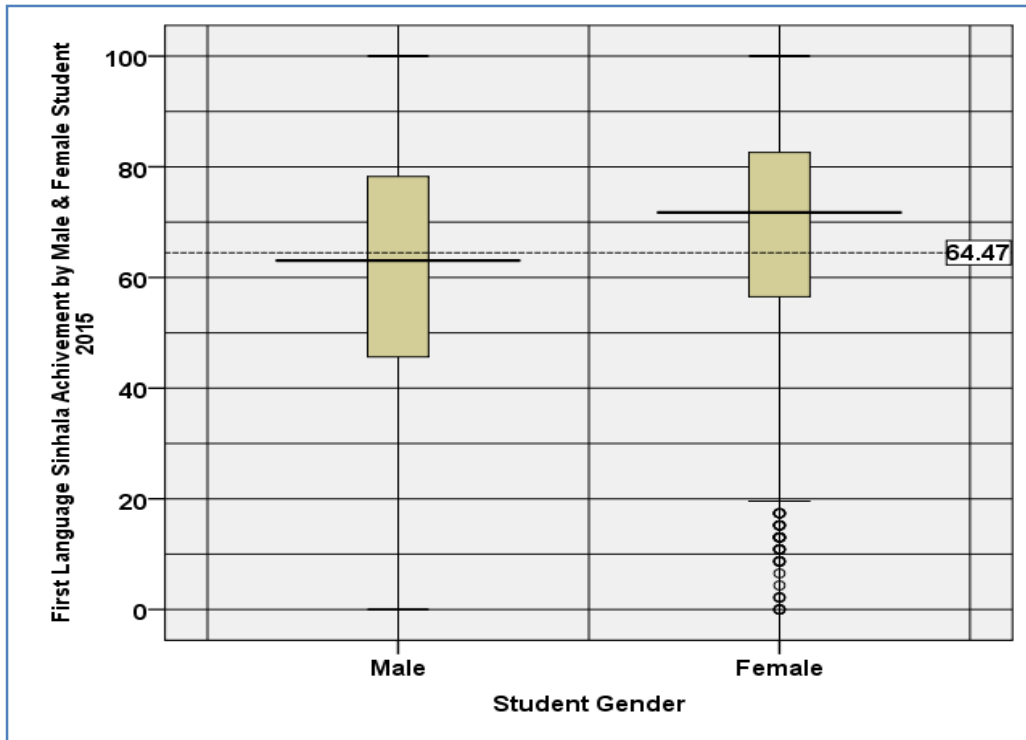
Fig. 3.10: Box plot and whisker plot representing gender wise Sinhala language marks

Box plot and whisker chart show that female students' marks dispersion is higher than the male students. Fifty percent of male students' achievement lies below the female students' achievement. Median of the male students lie close to the all island mean value line, where as the female students' median is higher than the all island mean. This means that while 50% of male students have scored 64.47, fifty percent of female students have scored above 64.47.

Female students' 25th, 50th and 75th percentile values are higher than male student's percentile values and all island percentile values.

However, as the boxplot depicts there are some female students who compared with the majority are very low performing. On the other hand, there are no outliers among the males.

Summary

- Female performance is better than all island and male performance.
- While only 8.26% of girls have scored below 40, the male percentage is 16.58.
- Highest percentage of females (24.01%) fall into the mark range 80-89. On the other hand, among the males the highest percentage belongs to a lower mark range 60-69 and a lower percentage (18.27%).
- However, among girls there are a few low performing outliers.

Students' achievement in relation to Sinhala language location wise will be discussed next.

3.6   Achievement levels by location

Table 3.8: Sinhala language achievement according to location

Location	Mean	Std. Error of Mean	Standard Deviation	Skewness	Percentile (25)	Median (50)	Percentile (75)
Rural	62.22	0.05	20.45	-0.47	47.83	65.22	78.26
Urban	67.87	0.06	20.12	-0.78	54.35	71.74	84.78
All Island	64.47	0.04	20.51	-0.58	50.00	67.39	80.43

As Table 3.8 indicates, there is variation in achievement among the schools in the different localities. The urban area schools have performed the best. On the other hand, the rural area schools have performed below the national mean. The difference in mean values is graphically shown in Fig. 3.11.
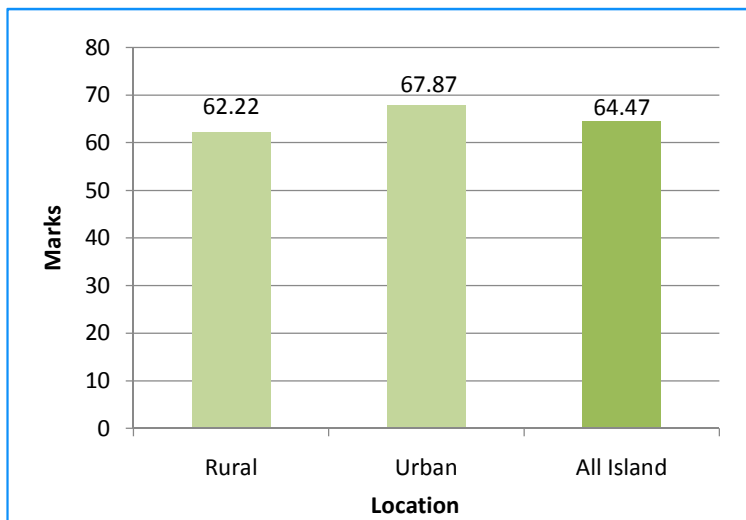
Fig. 3.11: Bar chart representing mean values according to location– Sinhala language

As Fig. 3.11 indicates the mean values in the urban area schools are higher than the schools in the rural areas. The gap in achievement between rural and urban area schools is visible.

On the other hand, when the median values given in Table 3.8 are considered, in the urban area schools the median is also higher than in the rural schools.

The deviation of the marks from the mean according to Table 3.8 appears to be quite different in the two localities. While the skewness values are negative denoting more high achievers, in the urban area schools the skewness is quite high indicating more high achievers. In the rural areas skewness is less indicating less high achievers.

However, the SD of urban, rural as well as all island is quite similar. This means that even though there are variations in achievement within the locality the pattern of variation is similar.

The dispersion of marks according to location, further illustrates this disparity.
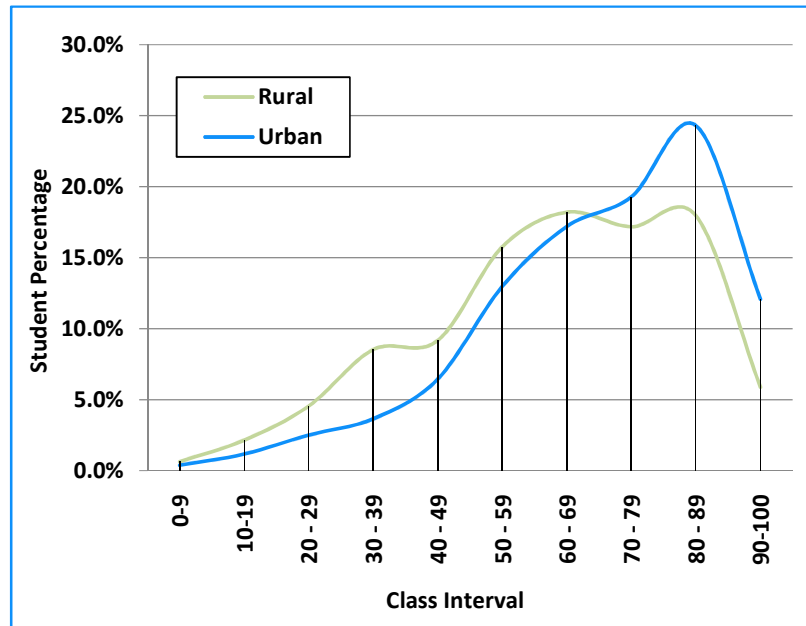
Fig. 3.12: Dispersion of marks by location – Sinhala language

Fig. 3.12 displays two negatively skewed curves. Hence, the number of high achievers in all localities are high. However, as has been already discussed the dispersion of marks in the two localities is different. While the urban curve indicates one high peak denoting very high achievers corresponding to the class interval 80-89, in the rural area curve there are two high peaks. One peak corresponds to the class interval 60-69 and the other at 80-89.

The pattern of achievement of students in the two localities are further illustrated in the cumulative percentage Table 3.9.

Table 3.9: Cumulative student percentages according to location –Sinhala language

Class Interval	Rural		Urban	
	Student %	Cumulative %	Student %	Cumulative %
0-9	0.64	0.64	0.38	0.38
10-19	2.15	2.79	1.17	1.55
20 - 29	4.55	7.35	2.51	4.06
30 - 39	8.53	15.88	3.66	7.72
40 - 49	9.18	25.06	6.45	14.17
50 - 59	15.76	40.82	12.97	27.14
60 - 69	18.20	59.01	17.20	44.35
70 - 79	17.17	76.18	19.28	63.63
80 - 89	17.94	94.13	24.30	87.93
90-100	5.87	100.00	12.07	100.00
Total	100.00		100.00	

According to Table 3.9 and Fig. 3.12 it could be concluded that, there are more high performing students in the urban area schools. The highest percentage (24.30%) of students falls into the class interval 80-89 in the urban area schools. Even though, a high percentage of students (17.94%) in the rural area schools also falls into the class interval 80-89, there is also a higher percentage of student (18.20%) who falls into the 60-69 class interval.

On the other hand, while there are only 7.72 cumulative percent of students in the urban area schools who has scored below 40 marks, there are 15.88% of students in the rural area schools who has scored less than 40 marks. Therefore, the overall achievement in Sinhala language of the students in the urban area schools is higher than the students in the rural area schools.

Box plot and whisker for location wise Sinhala language achievement elaborate the performance further.
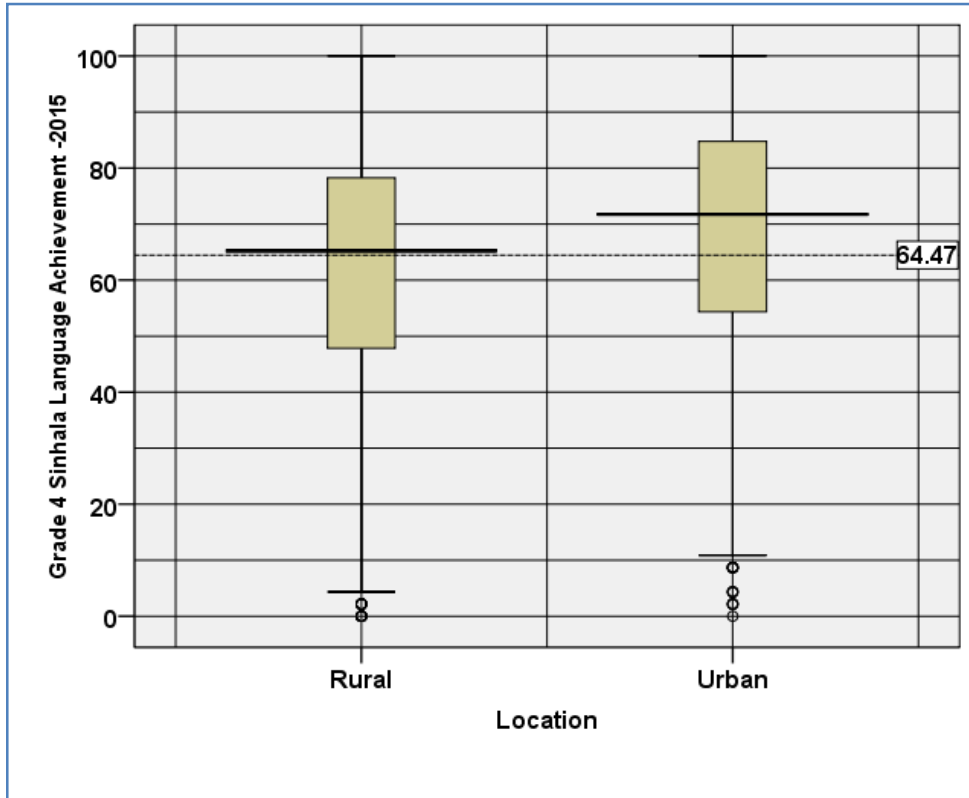
Fig. 3.13: Box plot and whisker plot representing location wise Sinhala language marks

As the box plots in Fig. 3.19 indicates the percentile values at all three (25th, 50th and 75th) levels are higher in the urban area schools than in the rural area schools. However, it is interesting to note that even though student performance is highest at all percentiles in the urban area schools, there are also low performing outliers.

Similar outliers can be seen in the rural area schools as well. However, in the rural schools number of outliers is less than in the urban schools.

Summary

- Highest achievement can be seen in the urban area schools and their mean value (67.87) is above the all island mean value.
- Even though there are high achievers in both the urban and rural area schools the percentage of high achievers is greater among the urban students.
- Low performing outliers can be seen in both urban and rual schools.

3.7   Analysis of achievement by sub skills

In constructing the achievement tests, the test items were designed in relation to the sub skills vocabulary, comprehension, syntax and writing and also in line with the Essential Learning Competencies (ELCs).

Students' performance according to the sub skills is given in Fig. 3.14.
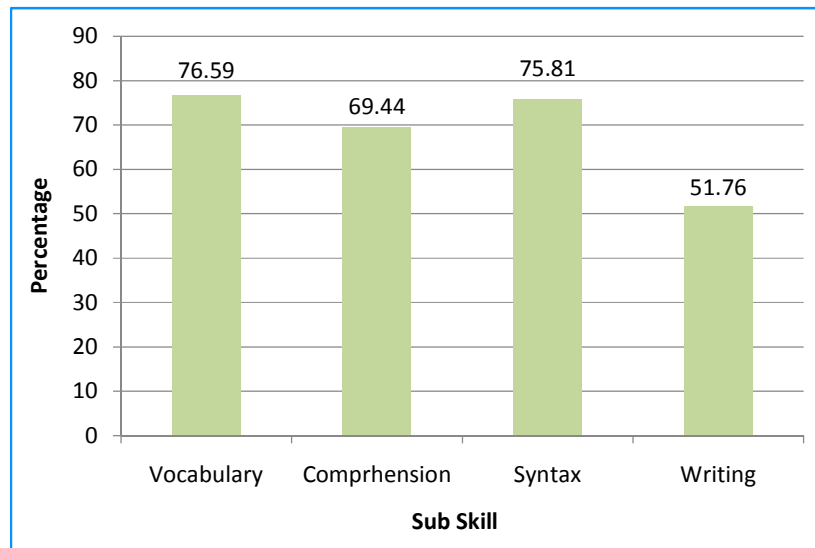
Fig. 3.14: Achievement in sub skills in Sinhala language

As Fig. 3.14 indicates, the weakest sub skill is writing.

The achievement in the writing task is further analyzed in Fig. 3.15. This analysis indicates the percentage of completely grammatically correct sentences, partially correct and incorrect sentences and the percentage not attempted.
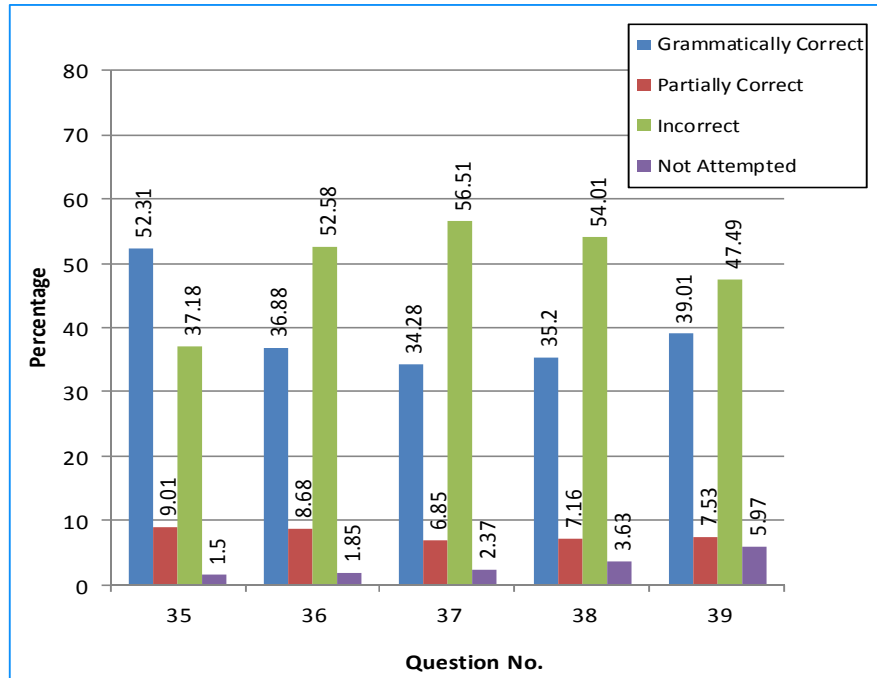
Fig. 3.15: Competency related to writing – Sinhala language

As the Fig. 3.15 indicates the percentage of incorrect sentences is rather high. On the other hand, there is more than 6% of students who has given partially correct answers which means that they are syntactically incorrect. Further, some students have not even attempted to write even the first sentence.

Essential learning competencies and students' achievement

In constructing the question paper as discussed in chapter 2, the framework for all three language papers were similar. That is, it was based on the sub skills of vocabulary, comprehension, syntax and writing. In addition, the Essential Learning Competencies identified by the National Institute of Education pertaining to each language was also considered. However, it was noted that there were no ELCs identified for some skills.

Table 3.10 analyzes student achievement in relation to ELCs and language skills.

Table 3.10: Student achievement in relation to ELCs/language skills

(ELC No)	Content of the paper	QS No	Correct %
	Vocabulary	1	94.50%
		2	95.60%
		3	89.10%
		4	74.20%
	Similar words	5	66.40%
	Opposite words	6	67.30%
	Terms related to various careers	7	47.40%
	Language terms related to the text book	8	57.80%
	Place, material and Personal nouns	9	85.50%
		10	88.10%
		11	88.90%
3	Filling a form	12	93.70%
		13	88.90%
		14	35.10%
6	Punctuation	15	89.30%
		16	58.00%
8	Spellings	17	29.40%
		18	50.90%
4	Subject verb agreement	19	89.90%
		20	70.30%
		21	57.40%
		22	69.30%
5	Sequencing	23	77.10%
		24	82.40%
7	Read and comprehend simple poem	25	64.50%
		26	82.40%
		27	73.00%
47	Read and comprehend invitations	28	93.00%
		29	82.80%
		30	76.20%
		31	80.80%
	Writing meaningful sentences	32	58.70%
		33	51.20%
		34	49.40%
	Writing	35	59.60%
		36	43.80%
		37	39.90%
		38	41.10%
		39	44.70%
		40	48.40%

As Table 3.10 indicates there are only seven ELCs. These relate mostly to reading. As the table displays students' knowledge of spellings is weak. Further, for question number 14 students had to infer the meaning to find the answer. This shows that the students inferring skills are weak. In vocabulary terms related to various careers is low. Writing meaning full sentences is also a weak area.

Facility index values for the Sinhala language paper

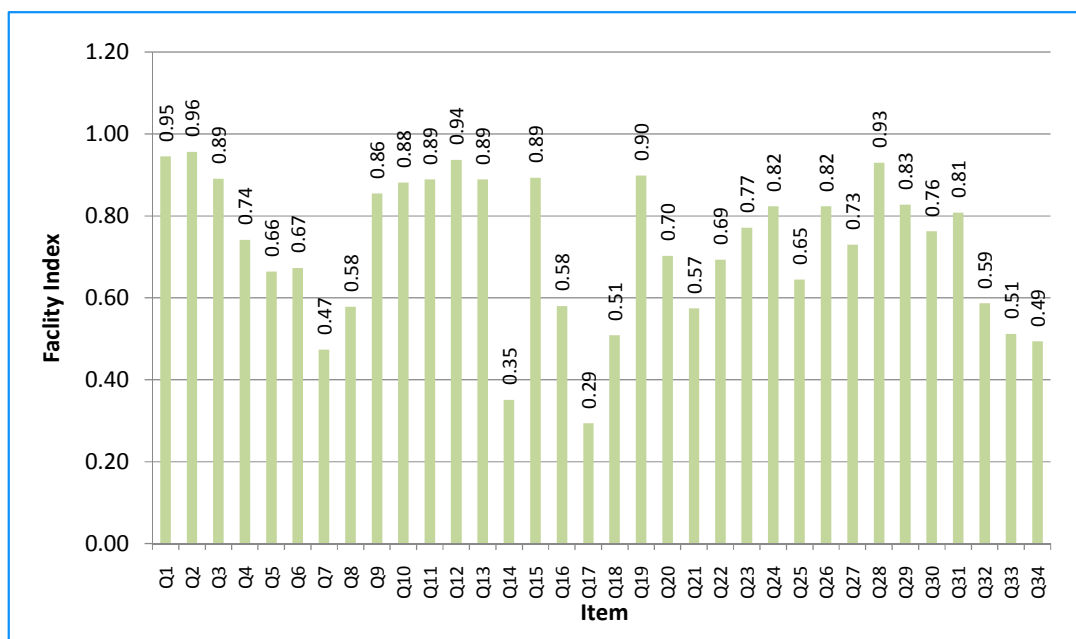The facility values given in Fig. 3.16 also confirm that students have found these items difficult.

*Fig. 3.16: Facility values for the different test items –Sinhala language*

Although the students' knowledge of grammar is satisfactory it appears that they are unable to construct meaning full sentences. Thus it could be inferred that they are unable to apply the grammatical knowledge they have gained.

Even though students are expected to write simple sentences, there is no ELC corresponding to writing paragraphs. Combination of these factors appears to have impacted on student's writing skills.

Part II- Comparison of achievement level of students in 2013 with that of 2015

Trends in achievement over the period 2013 -2015 will first be discussed at national level.

3.8   Trends in achievement at national level
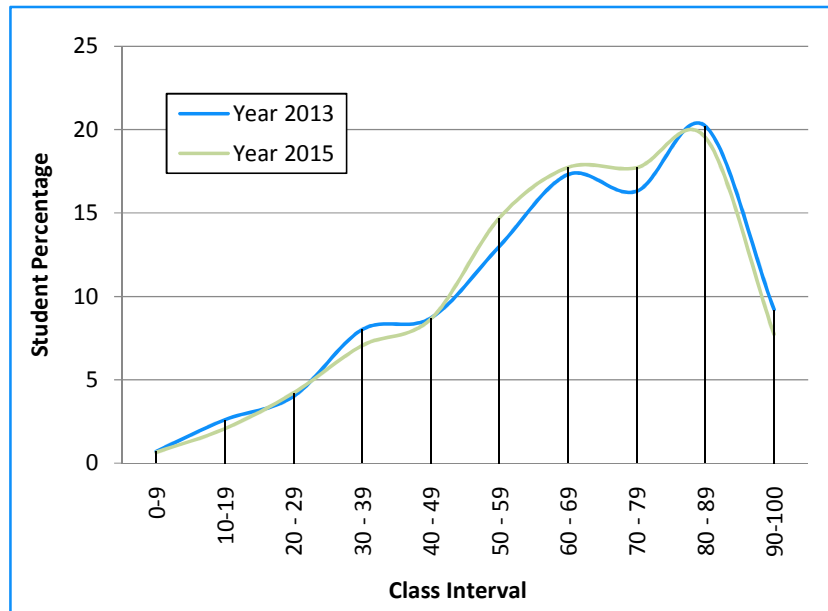
Fig. 3.17: Comparison of all island achievement in Sinhala language 2013 -2015 -dispersion of marks

Fig. 3.17 displays two negatively skewed curves which are quite similar. However, there are slight changes which has resulted in a slight drop in the mean value for the year 2015. This change can be further explained using the cumulative frequency table.

Table 3.11: Comparison of all island achievement in Sinhala language – Cumulative percentages

Class Interval	Year 2013		Year 2015	
	Student %	Cumulative %	Student %	Cumulative %
0-9	0.70	0.70	0.65	0.65
10-19	2.60	3.30	2.07	2.73
20 - 29	4.00	7.30	4.21	6.94
30 - 39	8.00	15.30	7.05	13.99
40 - 49	8.70	24.00	8.64	22.62
50 - 59	13.00	37.00	14.70	37.33
60 - 69	17.30	54.30	17.73	55.06
70 - 79	16.30	70.60	17.71	72.77
80 - 89	20.20	90.80	19.52	92.28
90-100	9.20	100.00	7.72	100.00
Total	100.00		100.00	

According to Table 3.11 the percentage of students who has scored below 40 marks has dropped in 2015 from 15.30 to 13.99. On the other hand, the percentage of students who has scored between 80–100 has also dropped from 29.40 to 27.24. This drop in the high performers has impacted on the mean value and it has decreased from 64.56 - 64.47.

The impact of the performances of the provinces will be discussed next.

3.9   Provincial wise comparison of student achievement

As Fig. 3.18 indicates the mean values in the different provinces have fluctuated. In four provinces the achievements have declined slightly. However the decline is significant only in the Southern Province. In Eastern and Uva there is slight increase in achievement. On the other hand, in the Northern and North Central Provinces there is a marked increase in achievement. As Table 3.12 indicates these positive changes are significant only in Northern, Eastern North Central and Uva Provinces.
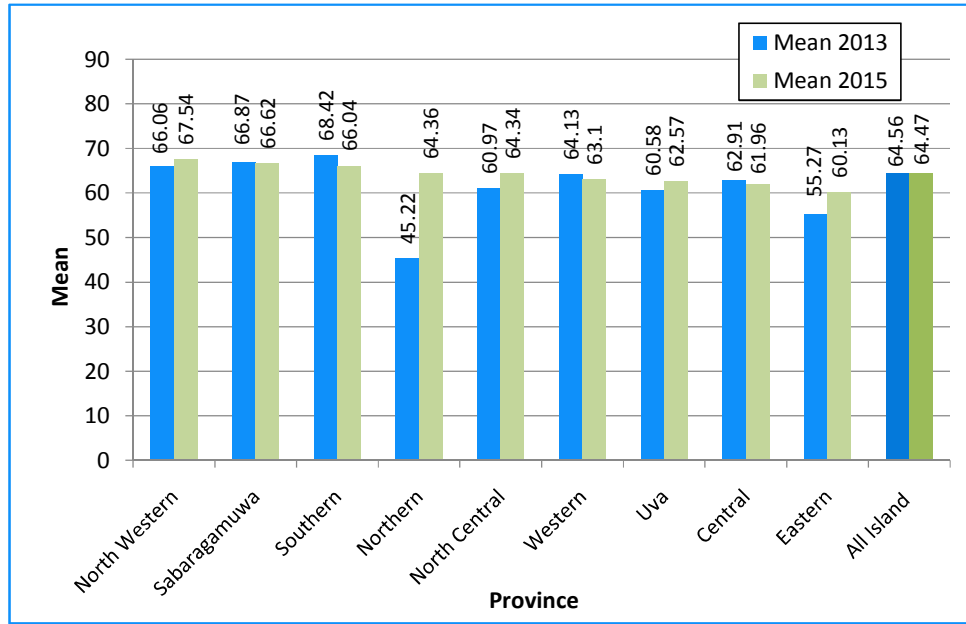
Fig. 3.18: Provincial wise comparison of student achievement - 2013 & 2015

Table 3.12: Provincial wise comparison of student achievement - 2013 & 2015

Province	Year 2013		Year 2015		Z
	Mean	Standard Deviation	Mean	Standard Deviation	
Central	62.91	19.89	61.97	19.85	1.10
Eastern	55.27	22.32	60.14	20.19	2.62*
North Central	60.97	20.83	64.34	19.84	4.38*
North Western	66.06	21.47	67.54	20.88	1.88
Northern	45.22	20.68	64.36	17.81	4.28*
Sabaragamuwa	66.87	19.69	66.62	19.88	0.35
Southern	68.42	20.33	66.04	19.67	3.50*
Uva	60.58	21.47	62.57	19.99	2.29*
Western	64.13	21.94	63.10	21.34	1.33
All Island	64.56	21.23	64.47	20.51	0.31

* Values are significant at 95%

The reasons for these changes can be explained by using the line curves in page 47. In the Southern Province the percentage of high achievers within the class interval 80-89 has declined. On the other hand, in the Northern, Eastern and Uva Provinces the percentage of high achievers has increased.
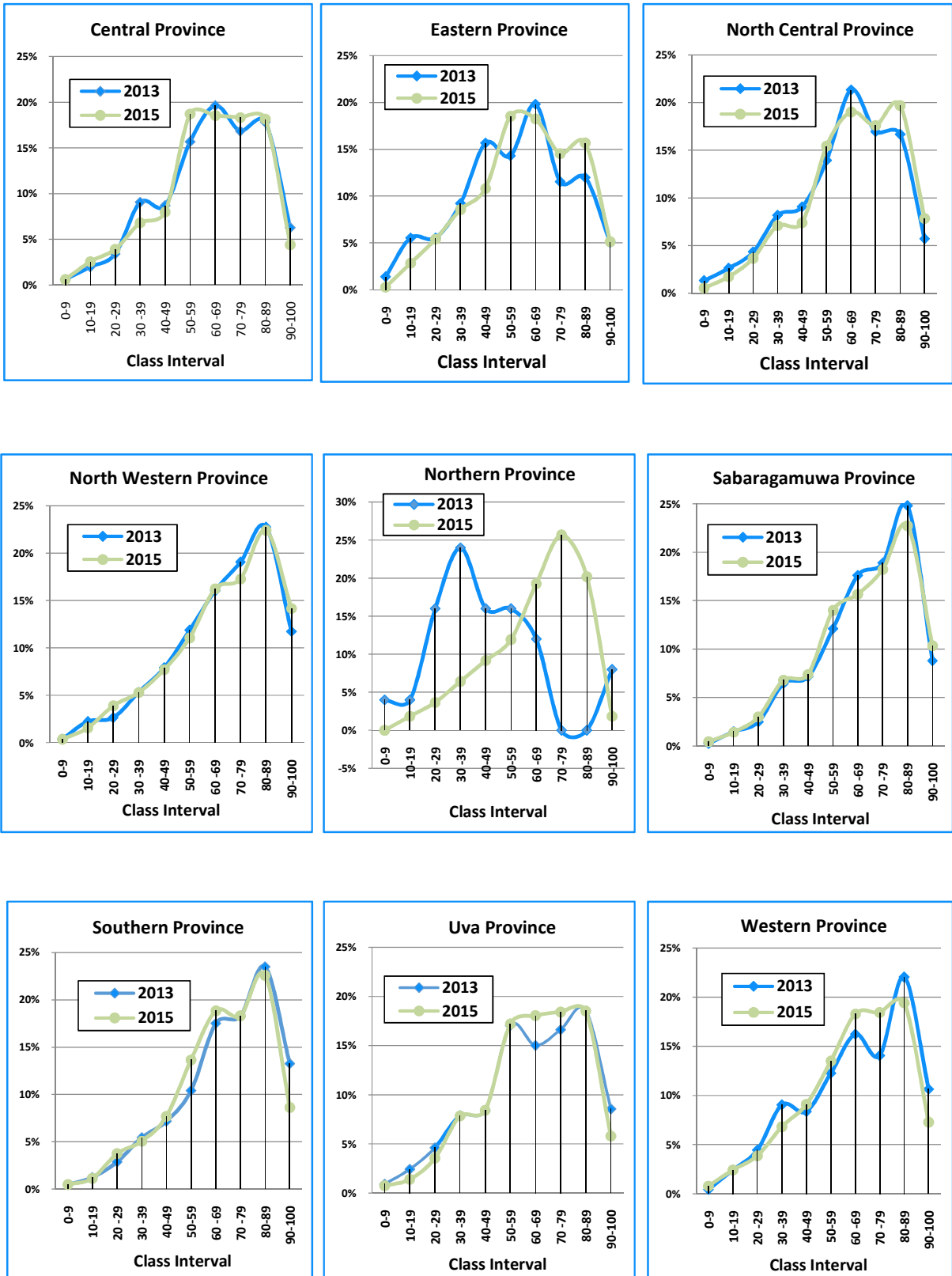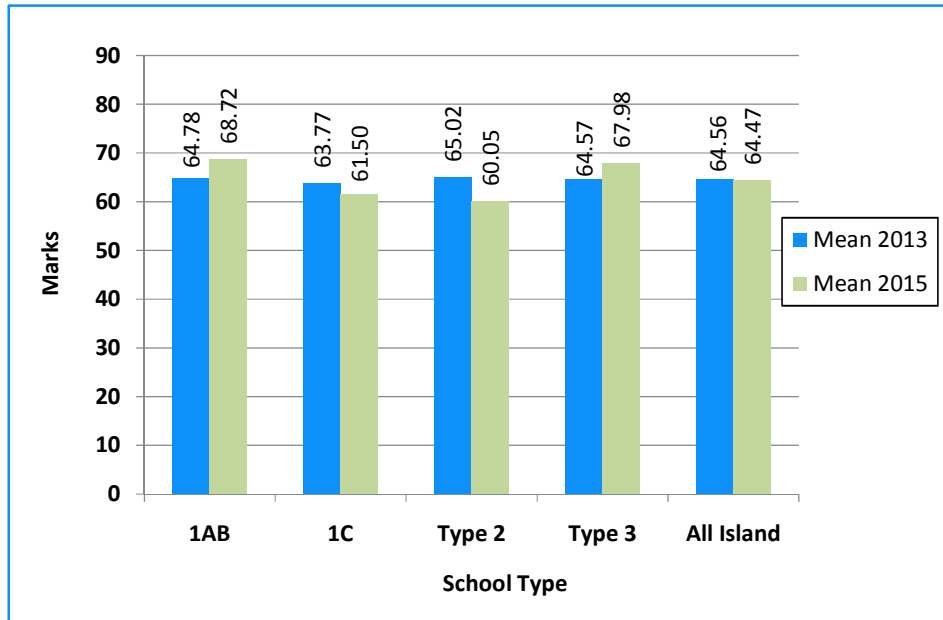
Fig. 3.19: Comparison of provincial wise distribution of marks – Sinhala language

Trends in achievement according to school type will be discussed next.

## 3.10   Comparison of marks according to school type

Fig. 3.20: All island comparison of mean values according to school type

As the Fig. 3.20 indicates there has been an increase in student achievement in 1AB and Type 3 schools. The achievement levels of these two school types have been approximately similar in the year 2013 and they have maintained this trend in the year 2015. On the other hand, the Type 2 schools performance had been above 1AB and Type 3 in 2013. However, in 2015 their performance has declined almost by 5 points. Similarly, 1C schools' achievement also has declined further. Therefore, the gap in achievement between 1AB and Type 3 schools and that of Type 2 and 1C has increased and impacted on the all island achievement negatively. This negative trend needs to be arrested.

Table 3.13: Comparison of achievement of 1AB schools

| Class Interval	1AB-Year 2013		1AB-Year 2015	
	Student %	Cumula-tive %	Student %	Cumula-tive %
0-9	0.09	0.09	0.25	0.25
10-19	0.91	1.00	0.87	1.12
20 - 29	4.19	5.19	2.04	3.16
30 - 39	8.56	13.75	3.66	6.82
40 - 49	8.56	22.31	5.65	12.47
50 - 59	14.75	37.07	13.38	25.85
60 - 69	17.67	54.74	17.46	43.31
70 - 79	18.76	73.50	20.10	63.41
80 - 89	16.94	90.44	24.83	88.24
90-100	9.56	100.00	11.76	100.00
Total	100		100	
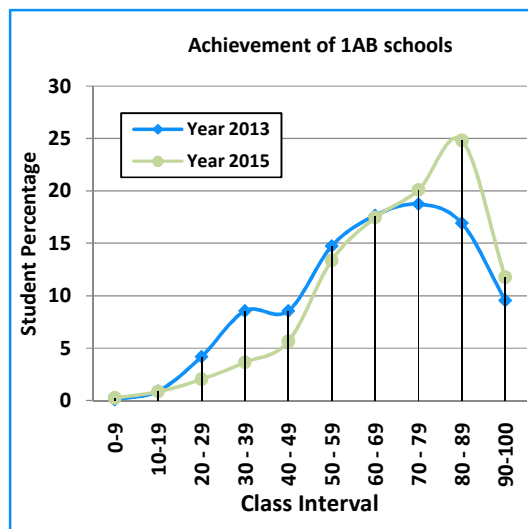
Fig 3.21: Comparison of achievement of 1AB schools – 2013 & 2015

The reason for the increase in achievement in 1AB schools is as indicated in Table 3.13 and Fig. 3.21 is due to the increase in the percentage of students scoring between 80-89 marks.

Table 3.14: Comparison of achievement of Type 3 schools

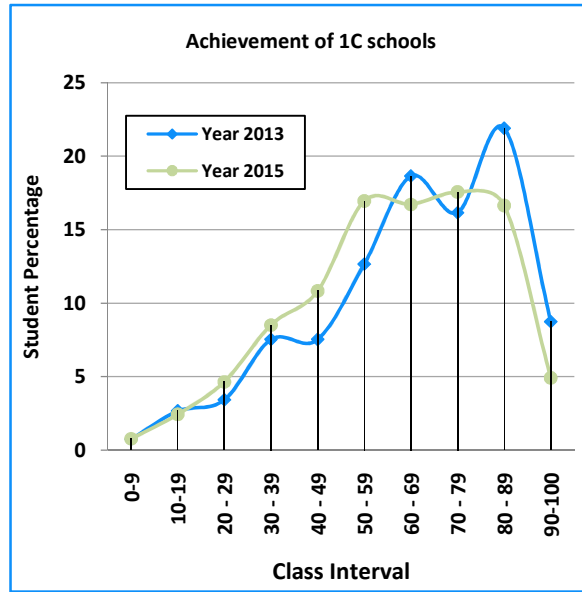| Class Interval	Type 3 - 2013		Type 3 - 2015	
	Student %	Cumula-tive %	Student %	Cumula-tive %
0-9	0.84	0.84	0.33	0.33
10-19	2.30	3.14	1.21	1.55
20 - 29	3.66	6.80	2.46	4.00
30 - 39	6.67	13.47	5.01	9.01
40 - 49	8.26	21.73	6.55	15.56
50 - 59	12.86	34.59	13.08	28.64
60 - 69	18.23	52.82	18.45	47.09
70 - 79	16.35	69.17	18.57	65.66
80 - 89	21.60	90.77	23.51	89.17
90-100	9.23	100.00	10.83	100.00
Total	100		100	
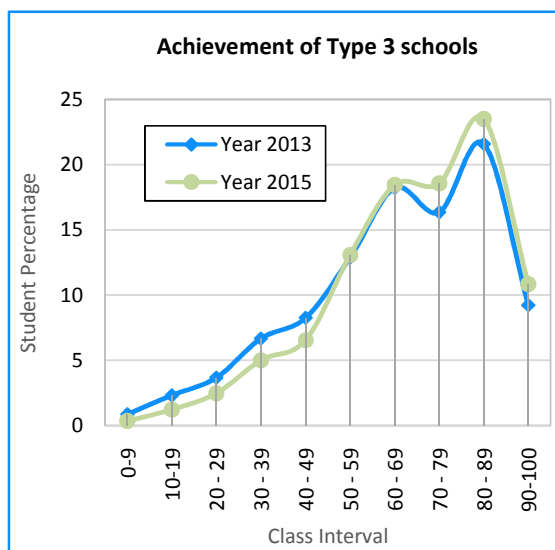
Fig 3.22: Comparison of achievement of Type 3 schools – 2013 & 2015

The same trend is observed in Type 3 schools.

Table 3.15: Comparison of achievement of 1C schools

| Class Interval	1C - 2013		1C - 2015	
	Student %	Cumula- tive %	Student %	Cumula- tive %
0-9	0.73	0.73	0.78	0.78
10-19	2.65	3.38	2.43	3.22
20 - 29	3.42	6.80	4.65	7.87
30 - 39	7.53	14.33	8.52	16.38
40 - 49	7.53	21.86	10.82	27.21
50 - 59	12.66	34.53	16.95	44.15
60 - 69	18.65	53.18	16.73	60.89
70 - 79	16.16	69.34	17.56	78.44
80 - 89	21.91	91.25	16.64	95.09
90-100	8.75	100.00	4.91	100.00
Total	100		100	

Fig. 3.23: Comparison of achievement of 1C schools – 2013 & 2015

As Table 3.15 and Fig. 3.23 the percentage of high achievers has decreased.

Table 3.16: Comparison of achievement of Type 2 schools

Class Interval	Type 2 - 2013		Type 2 - 2015	
	Student %	Cumula - tive %	Student %	Cumula- tive %
0-9	0.55	0.55	0.79	0.79
10-19	1.92	2.47	2.49	3.28
20 - 29	3.40	5.87	5.77	9.05
30 - 39	7.27	13.14	8.85	17.91
40 - 49	8.52	21.65	9.33	27.23
50 - 59	12.98	34.63	15.42	42.65
60 - 69	16.46	51.09	18.14	60.79
70 - 79	17.86	68.95	16.21	77.00
80 - 89	20.98	89.93	17.04	94.03
90-100	10.07	100.00	5.97	100.00
Total	100		100	
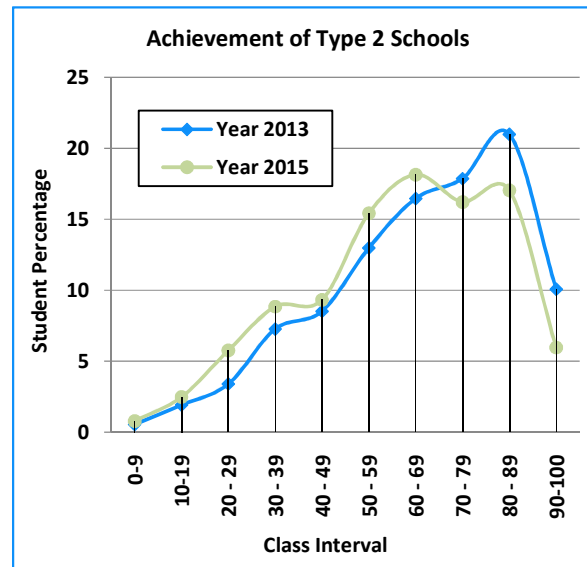
Fig. 3.24: Comparison of achievement of Type 2 schools – 2013 & 2015

The same trend observed in 1C schools can be seen in Type 2 schools.

Trends in achievement gender wise will be discussed next.
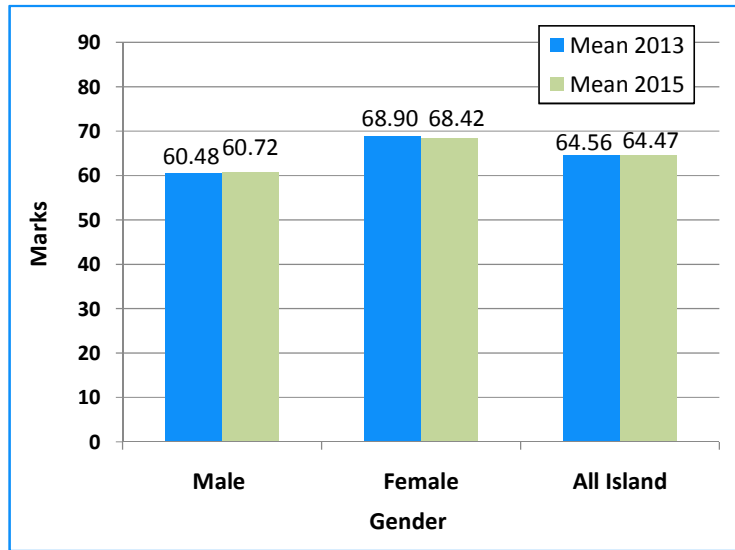
3.11   Comparison of marks according to gender

Fig. 3.25: All island comparison of mean values according to gender

As Fig. 3.25 displays the male students' achievement has increased slightly. On the other hand, the female performance has decreased slightly. The increase in male performance is a positive sign. However, the gap in achievement between males and females continue and measures need to be taken to arrest this trend.

Table 3.17: Comparison of achievement of male students

Class Interval	Male - 2013		Male - 2015	
	Student %	Cumula - tive %	Student %	Cumula- tive %
0-9	0.98	0.98	0.78	0.78
10-19	2.89	3.87	2.33	3.11
20 - 29	4.88	8.75	5.14	8.25
30 - 39	9.36	18.11	8.33	16.58
40 - 49	9.51	27.62	9.53	26.11
50 - 59	14.10	41.71	16.28	42.39
60 - 69	17.15	58.86	18.27	60.66
70 - 79	16.54	75.40	16.23	76.89
80 - 89	17.67	93.06	17.28	94.16
90-100	6.94	100.00	5.84	100.00
Total	100		100	

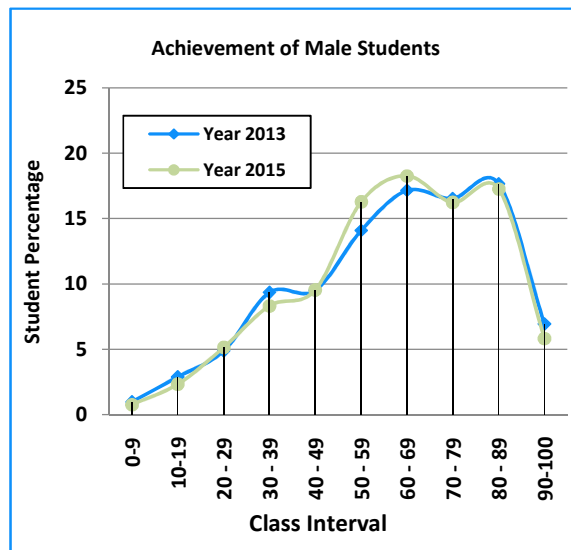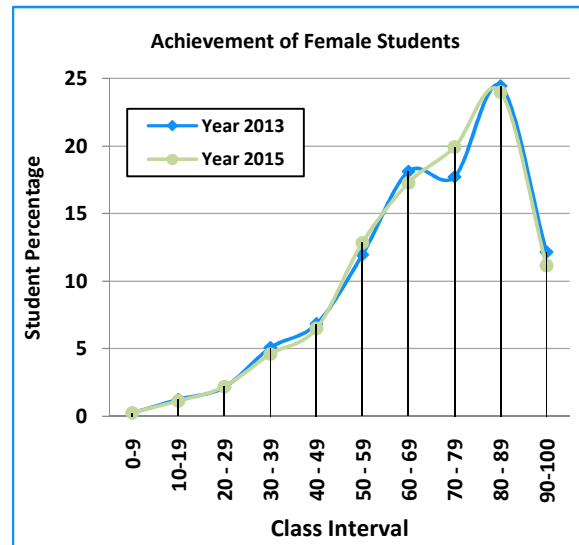***Fig. 3.26: Comparison of achievement of male students – 2013 & 2015***

**Table 3.18: Comparison of achievement of female students**

Class Interval	Female - 2013		Female - 2015	
	Student %	Cumula-tive %	Student %	Cumula-tive %
0-9	0.26	0.26	0.28	0.28
10-19	1.26	1.51	1.13	1.41
20 - 29	2.16	3.68	2.22	3.63
30 - 39	5.09	8.77	4.62	8.26
40 - 49	6.84	15.61	6.50	14.76
50 - 59	11.95	27.56	12.86	27.63
60 - 69	18.12	45.68	17.29	44.91
70 - 79	17.73	63.40	19.93	64.84
80 - 89	24.45	87.85	24.01	88.85
90-100	12.15	100.00	11.15	100.00
Total	100		100	

Fig. 3.27: Comparison of achievement of female students – 2013 & 2015

Trend in achievement location-wise will be discussed next.

3.12   Comparison according to location
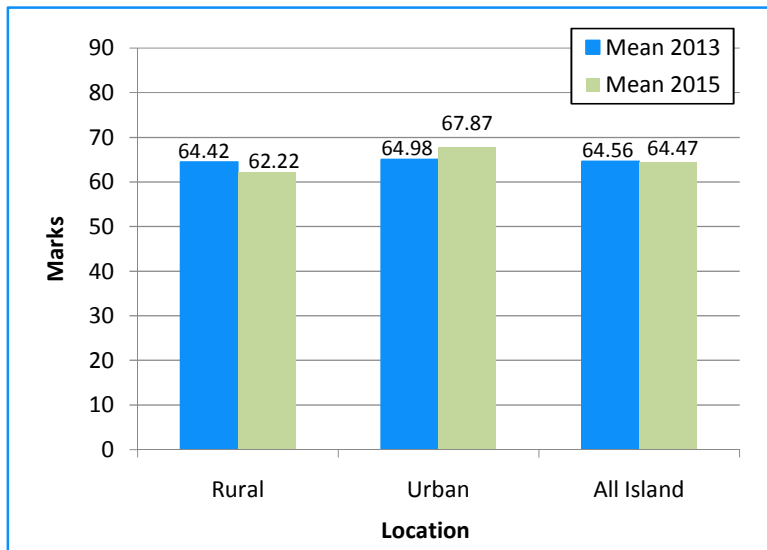

Fig. 3.28: All island comparison of mean values according to location

As Fig. 3.28 displays there is a decline in achievement in rural area schools while there is an increase in the urban area schools. This trend while having an impact on the all island performance has also increased the gap in achievement of students in the rural area schools and urban area schools.

Table 3.19: Comparison of achievement of rural schools

| Class Interval	Rural - 2013		Rural - 2015	
	Student %	Cumula- tive %	Student %	Cumula- tive %
0-9	0.67	0.67	0.64	0.64
10-19	2.16	2.83	2.15	2.79
20 - 29	3.70	6.53	4.55	7.35
30 - 39	7.61	14.14	8.53	15.88
40 - 49	8.68	22.82	9.18	25.06
50 - 59	13.16	35.98	15.76	40.82
60 - 69	17.75	53.73	18.20	59.01
70 - 79	16.88	70.60	17.17	76.18
80 - 89	20.21	90.81	17.94	94.13
90-100	9.19	100.00	5.87	100.00
Total	100		100	
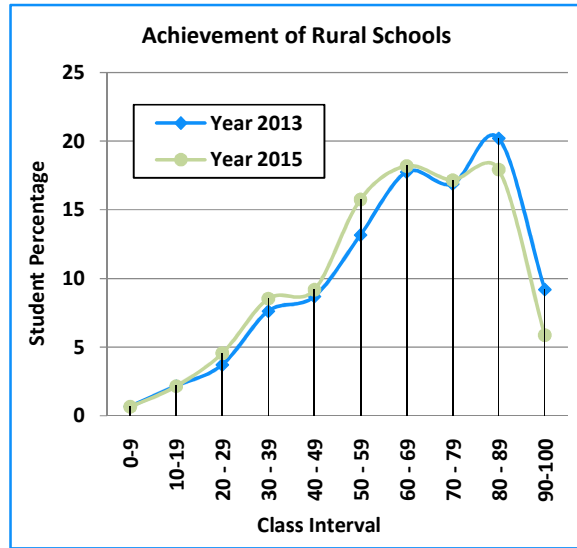
Fig. 3.29: Comparison of achievement of rural schools – 2013 & 2015

As Table 3.19 and Fig. 3.29 indicate the reason for the decline in performance is due to the drop in percentage of high achievers (80-89) in 2015.

Table 3.20: Comparison of achievement of urban schools

Class Interval	Urban - 2013		Urban - 2015	
	Student %	Cumula- tive %	Student %	Cumula- tive %
0-9	0.47	0.47	0.38	0.38
10-19	1.89	2.36	1.17	1.55
20 - 29	3.08	5.44	2.51	4.06
30 - 39	6.17	11.61	3.66	7.72
40 - 49	6.60	18.21	6.45	14.17
50 - 59	12.68	30.89	12.97	27.14
60 - 69	17.18	48.07	17.20	44.35
70 - 79	17.95	66.02	19.28	63.63
80 - 89	23.56	89.59	24.30	87.93
90-100	10.41	100.00	12.07	100.00
Total	100		100	
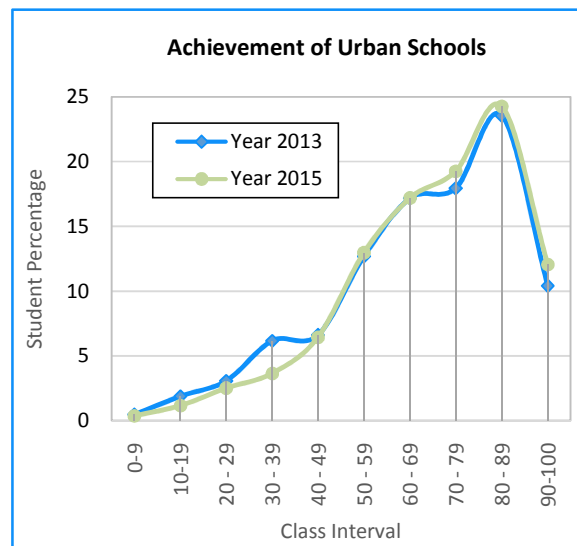
Fig. 3.30: Comparison of achievement of urban schools – 2013 & 2015

On the other hand in urban area schools the percentage of high achievers has increased.

Trends in the achievement of sub skills will be discussed next.

3.13   Skill analysis comparison
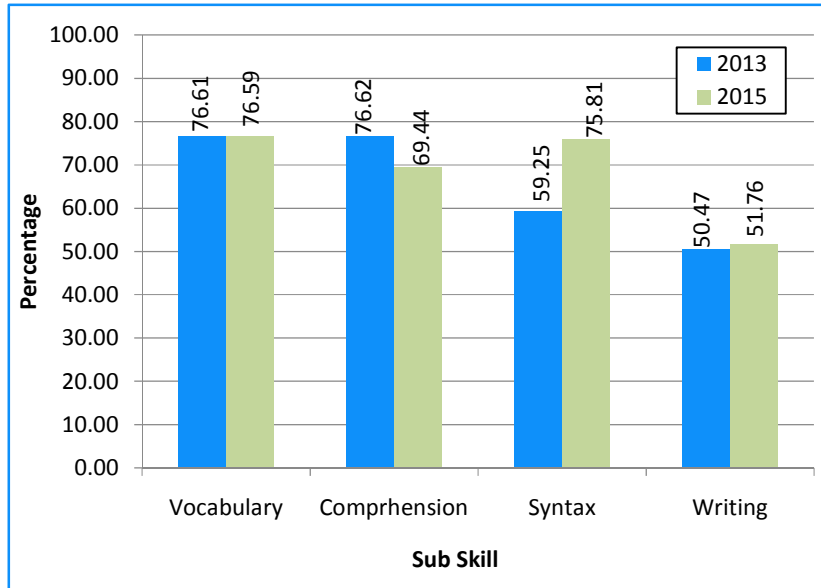
Fig. 3.31: Comparison of achievement of sub skills in Sinhala language

As Fig. 3.31 displays there is a decline in comprehension while there is a substantial increase in the understanding of syntax. On the other hand, while there is no change in vocabulary there is a slight increase in writing achievement. However, the weakest skill is still writing.

Table 3.21: Comparison of achievement of ELCs/language skills

ELC no	Description	Q.No	% of correct responses - 2013	% of correct responses - 2015	Change
	Vocabulary	1	94.10%	94.50%	+
		2	94.90%	95.60%	+
		3	92.00%	89.10%	-
		4	73.30%	74.20%	+
	Similar words	5	65.60%	66.40%	+
	Opposite words	6	67.70%	67.30%	-
	Terms related to various careers	7	45.70%	47.40%	+
	Language terms related to the text book	8	55.10%	57.80%	+
	Place, material and Personal nouns	9	84.00%	85.50%	+
		10	85.40%	88.10%	+
		11	84.90%	88.90%	+
3	Filling a form	12	89.70%	93.70%	+
		13	89.10%	88.90%	-
		14	33.50%	35.10%	+
6	Punctuation	15	89.50%	89.30%	-
		16	53.50%	58.00%	+
8	Spellings	17	29.30%	29.40%	+
		18	45.90%	50.90%	+
4	Subject verb agreement	19	88.40%	89.90%	+
		20	67.20%	70.30%	+
		21	53.80%	57.40%	+
		22	67.20%	69.30%	+
5	Sequencing	23	74.40%	77.10%	+
		24	80.80%	82.40%	+
7	Read and comprehend simple poem	25	65.50%	64.50%	-
		26	80.90%	82.40%	+
		27	74.00%	73.00%	-
47	Read and comprehend invitations	28	93.30%	93.00%	-
		29	82.20%	82.80%	+
		30	76.50%	76.20%	-
		31	79.50%	80.80%	+
	Writing meaningful sentences	32	58.90%	58.70%	-
		33	51.80%	51.20%	-
		34	46.30%	49.40%	+
	Writing	35	63.60%	59.60%	-
		36	48.70%	43.80%	-
		37	44.70%	39.90%	-
		38	45.40%	41.10%	-
		39	48.20%	44.70%	-
		40	52.30%	48.40%	-

Table 3.21 displays there is not much improvement in students' achievement in skills and competencies during the period 2013-2015. Students' knowledge of spellings is still weak. Further, inferring skills (Q.14) and in vocabulary, terms related to various careers still remain at an unsatisfactory level. Writing meaning full sentences is also a weak area.

There is only a slight increase in writing skills. Table 3.22 compares the analysis of the writing task over the period 2013 -2015.

Table 3.22: Comparison of achievement of writing skills

Question No	Writing	Year 2013	Year 2015	Change
35	Grammatically Correct	57.32%	52.31%	-
	One Word Answer	8.19%	9.01%	+
	Incorrect	33.40%	37.18%	+
	Not Attempted	1.10%	1.50%	+
36	Grammatically Correct	42.41%	36.88%	-
	One Word Answer	7.57%	8.68%	+
	Incorrect	46.66%	52.58%	+
	Not Attempted	1.36%	1.85%	+
37	Grammatically Correct	37.35%	34.28%	-
	One Word Answer	8.42%	6.85%	-
	Incorrect	52.54%	56.51%	+
	Not Attempted	1.68%	2.37%	+
38	Grammatically Correct	36.82%	35.20%	-
	One Word Answer	9.77%	7.16%	-
	Incorrect	51.02%	54.01%	+
	Not Attempted	2.39%	3.63%	+
39	Grammatically Correct	40.37%	39.01%	-
	One Word Answer	9.25%	7.53%	-
	Incorrect	46.29%	47.49%	+
	Not Attempted	4.09%	5.97%	+
40	Grammatically Correct	44.49%	41.83%	-
	One Word Answer	9.41%	8.69%	-
	Incorrect	39.92%	39.93%	+
	Not Attempted	6.17%	9.55%	+

According to this table the percentage of grammatically correct sentences written by the students has decreased. Therefore, even though there is a slight improvement in the discrete writing skills students overall writing skills has not improved.

3.14 Summary

Part I of this chapter discussed students' performance in the Sinhala language at national level, provincial level as well as in relation to school type, gender and location.

Test items used to assess students' achievement were analyzed to assess how far they have been successful in achieving the sub skills of the language expected to be achieved by grade 4 pupils.

Part II described the trends in achievement between 2013-2015.

It could be concluded that there is disparity in achievement of learning outcomes in the learning of Sinhala language.