Chapter Three

Pattern in Achievement : First Language - 2013

3.1 Introduction

This chapter presents the patterns in achievement of the students in the first languages – Sinhala and Tamil.

The patterns in achievement will first be presented at all island level to get an overview of the students' achievement in Sinhala language and Tamil language. As discussed in Chapter 2, the explicit strata in the 2013 study is the province. The implicit strata are the medium of instruction, gender, school type and location.

3.2 Patterns in achievement at national level

3.2.1 Achievement in Sinhala language

National level student achievement would be discussed first in relation to student performance pertaining to Sinhala language.
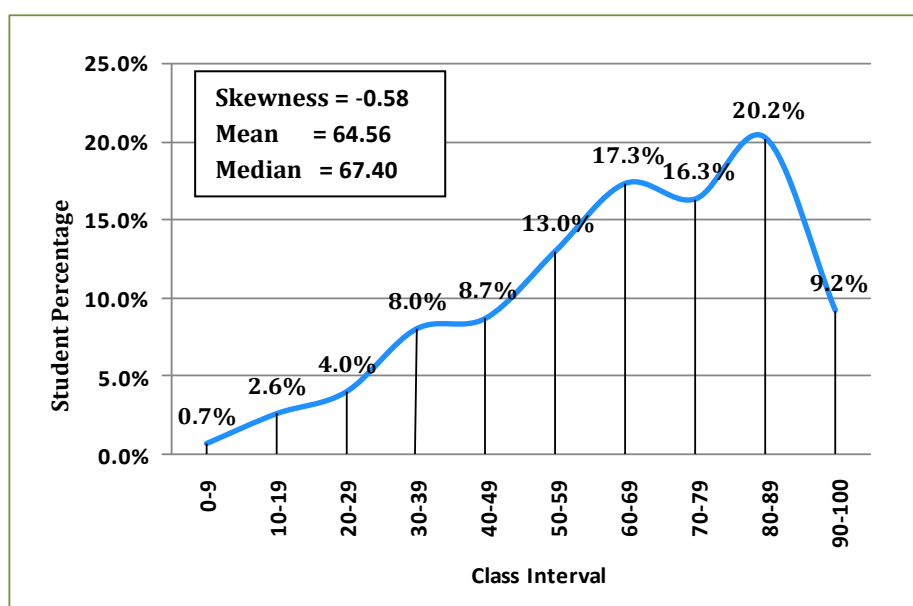

Fig. 3.1: All island achievement in Sinhala language - 2013 – dispersion of marks

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 given below.

Table 3.1: All island achievement in Sinhala languages 2013 – cumulative percentages

Class Interval	Students Percentage	Cumulative Percentage
90 to 100	9.20%	100.00%
80 to 89	20.20%	90.80%
70 to 79	16.30%	70.60%
60 to 69	17.30%	54.30%
50 to 59	13.00%	37.00%
40 to 49	8.70%	24.00%
30 to 39	8.00%	15.30%
20 to 29	4.00%	7.30%
10 to 19	2.60%	3.30%
0 to 9	0.70%	0.70%
Total	100.00%	

Less than one percent of students has scored less than 10 marks out of 100 for the Sinhala language paper. Approximately, 15.3 % of students has obtained marks below 40 marks. On the other hand, the highest percentage of students (20.20%) has scored between 80-89. However, the number of students who has scored above 90 marks is only 9.2%.

Fig. 3.2 illustrates student achievement patterns further.

The boxplot in Fig. 3.2 displays more than 50% of students has reached 67.40 mark level. Further, 75% of students has scored up to 82.61. The marks of the majority of the students' are between 50 and 82.61. However, there are few students who have scored

very low marks and below the range of the others. Hence they are considered as outliers.
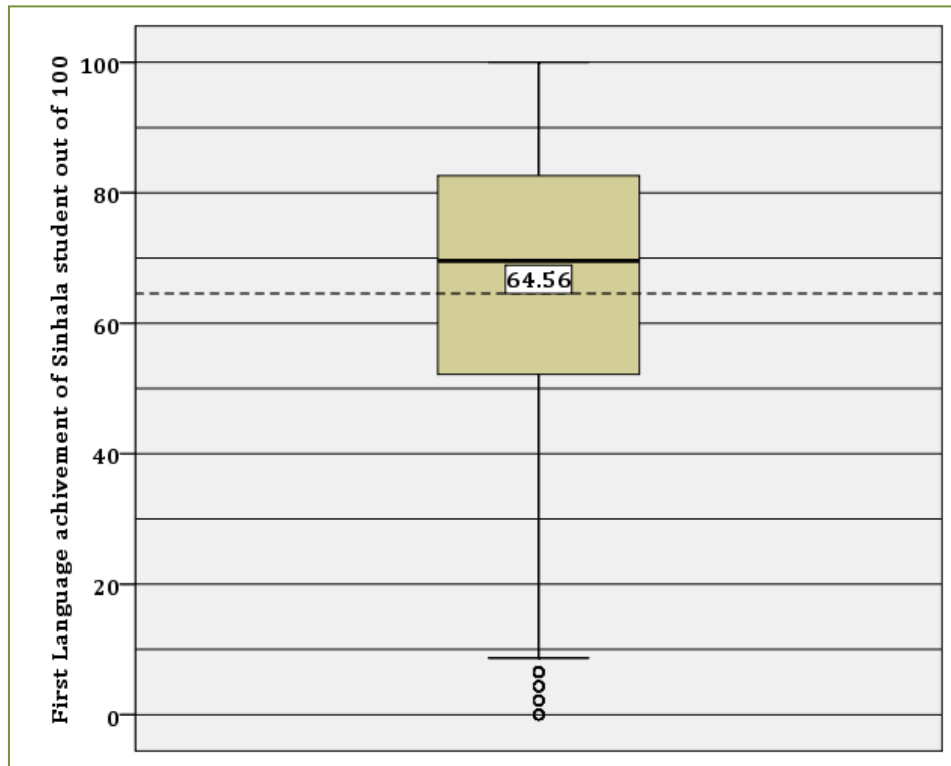

Fig. 3.2: Boxplot and whisker chart for Sinhala language achievement of Grade 4 students in 2013

Summary of national level achievement – Sinhala language

- National level mean is 64.56, while the median is 67.40.

- Disparity in achievement prevails with approximately 15.3 % of students scoring below 40% and 20% of students scoring between 80-89 marks. However, there are also a few outliers those whose marks are very low compared to others.

National level student achievement in relation to student performance pertaining to Tamil language would be discussed next.

3.2.2 Achievement in Tamil language

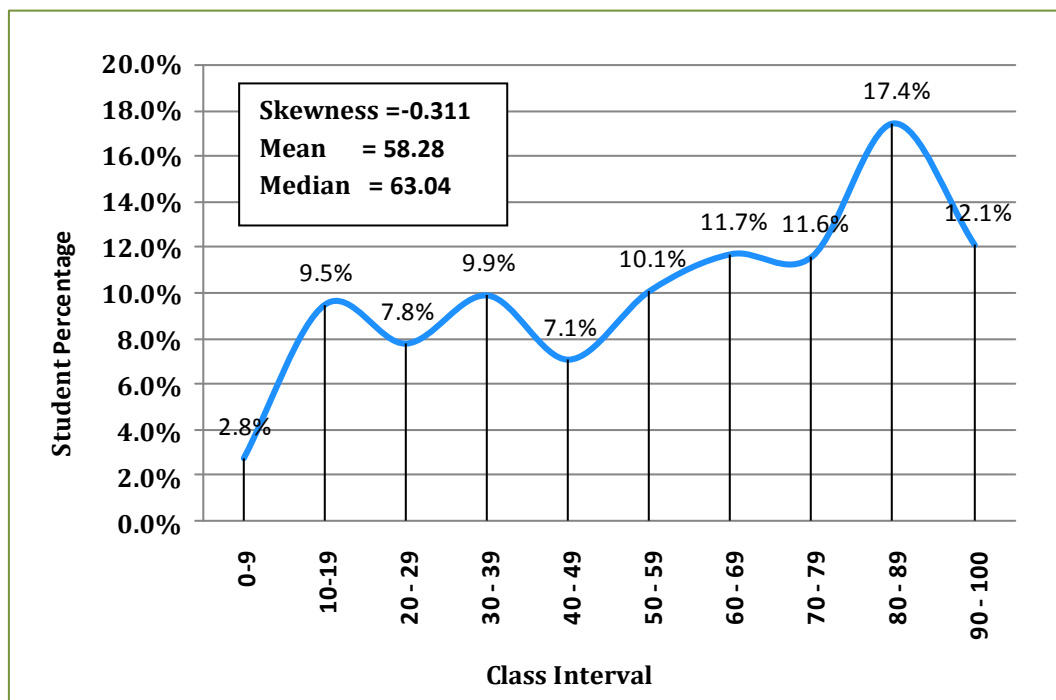**Skewness =-0.311**
Mean = 58.28
Median = 63.04

Fig. 3.3: All island achievement in Tamil language -2013 – dispersion of marks

The frequency polygon shown in Fig. 3.3 outlines the total picture of the distribution of marks of grade 04 students in the Tamil language.

Fig. 3.3 depicts a negatively skewed distribution of marks displaying that majority of the students has scored high marks in the Tamil language.

The dispersion of marks is further explained in the cumulative percentage Table 3.2 given below.

Table 3.2: All island achievement in Tamil languages 2013 – cumulative percentages

Class Interval	Student Percentage	Cumulative Percentage
90 to 100	12.10%	100.00%
80 to 89	17.40%	87.90%
70 to 79	11.60%	70.50%
60 to 69	11.70%	58.90%
50 to 59	10.10%	47.20%
40 to 49	7.10%	37.10%
30 to 39	9.90%	30.00%
20 to 29	7.80%	20.10%
10 to 19	9.50%	12.30%
0 to 9	2.80%	2.80%
Total	100.00%	

According to the above Table, majority of the students has scored between 80-89 which is similar to the performance in Sinhala language. However, the percentage of students who fall into this class interval is less (17.40%). On the other hand, there are 12.10% of students who falls into the class interval 90-100 which is higher than the performance in Sinhala language.

Furthermore, 30.0% of students has scored less than 40.

Therefore, there is more heterogeneity in achievement in the Tamil language than in the Sinhala language. Further, higher percentage of students scoring below 40 has also affected the all island mean for the Tamil language. As a result, it is less than the mean for the Sinhala language.

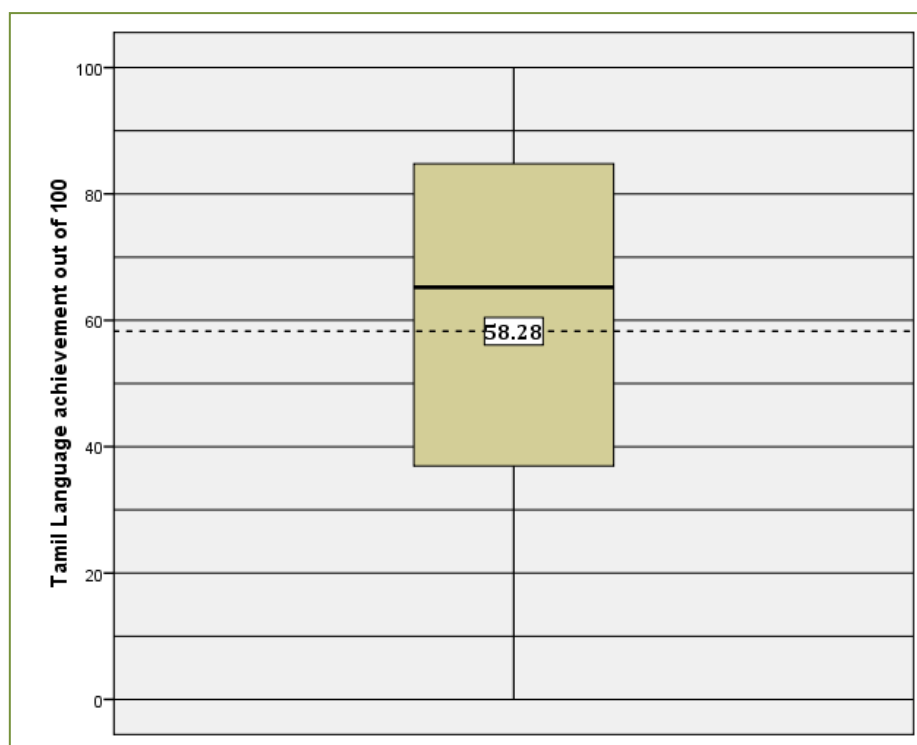Fig. 3.4 illustrates student achievement patterns further.

Fig. 3.4: Boxplot and whisker chart for Tamil language achievement of Grade 4 students in 2013

As the boxplot in Fig. 3.4 displays more than 50% of students has reached the 63.04 mark level. Further 75% of students has reached the 82.61 mark level. Majority of the students marks are between 50 and 82.61. However, only 34.78% has reached 25th percentile level.

When compared with the performance in Sinhala language, it could be concluded that Tamil students' performance at the 25th percentile is less than that of the Sinhala students. However, due to the high performance of a few Tamil students, the overall performance at the 75th percentile is similar in both languages.

Summary of national level achievement – Tamil language

- National level mean is 58.28, while the median is 63.04.
- Disparity in achievement prevails with approximately 30.00% of students scoring below 40% and 17.40% of students scoring between 80-89 marks and another 12.10% scoring between 90-100 marks. Therefore, student heterogeneity is greater in Tamil as a first language performance.

Provincial wise student achievement would be discussed next.

3.3   Provincial wise student achievement

3.3.1 Provincial wise student achievement – Sinhala language

The nature of the distribution of scores provincial wise reveals certain patterns. First these patterns pertaining to the Sinhala language are discussed using Table 3.3

Table 3.3: Provincial achievement in Sinhala language 2013 –summary statistics

Province	Mean	Rank	Standard Deviation	Standard Error of Mean	skewness	Percentile (p25)=Q1	Median (p50)=Q2	Percentile (p75)=Q3
Southern	68.42	1	20.334	0.097	-0.779	56.522	71.739	84.783
Sabaragamuwa	66.87	2	19.694	0.119	-0.721	54.348	71.739	82.609
North Western	66.06	3	21.466	0.11	-0.738	52.174	71.739	82.609
Western	64.13	4	21.936	0.082	-0.487	47.826	67.391	82.609
Central	62.91	5	19.885	0.121	-0.462	50	65.217	78.261
North Central	60.97	6	20.828	0.143	-0.535	45.652	63.043	76.087
Uva	60.58	7	21.475	0.152	-0.413	45.652	63.043	78.261
Eastern	55.27	8	22.32	0.313	-0.24	41.304	56.522	71.739
Northern	45.22	9	20.683	0.761	0.463	32.609	43.478	56.522
All Island	**64.56**		**21.232**	**0.042**	**-0.58**	**50**	**67.391**	**82.609**

As Table 3.3 indicates based on provincial wise mean achievement, Southern province ranks first and its mean value is above the all island value as well.

In terms of achievement, the provinces fall into three main categories. Southern, Sabaragamuwa, and North Western with mean scores above the national mean, fall into the higher category.

Western province mean is just below the all island mean. Central, North Central, and Uva cluster in the middle and in these four provinces the mean value is above 60. On the other hand, Northern and Eastern fall into the lowest category. Between the Southern

and Northern provinces there is, almost 24 point difference in mean values indicating the disparity in achievement among the provinces.

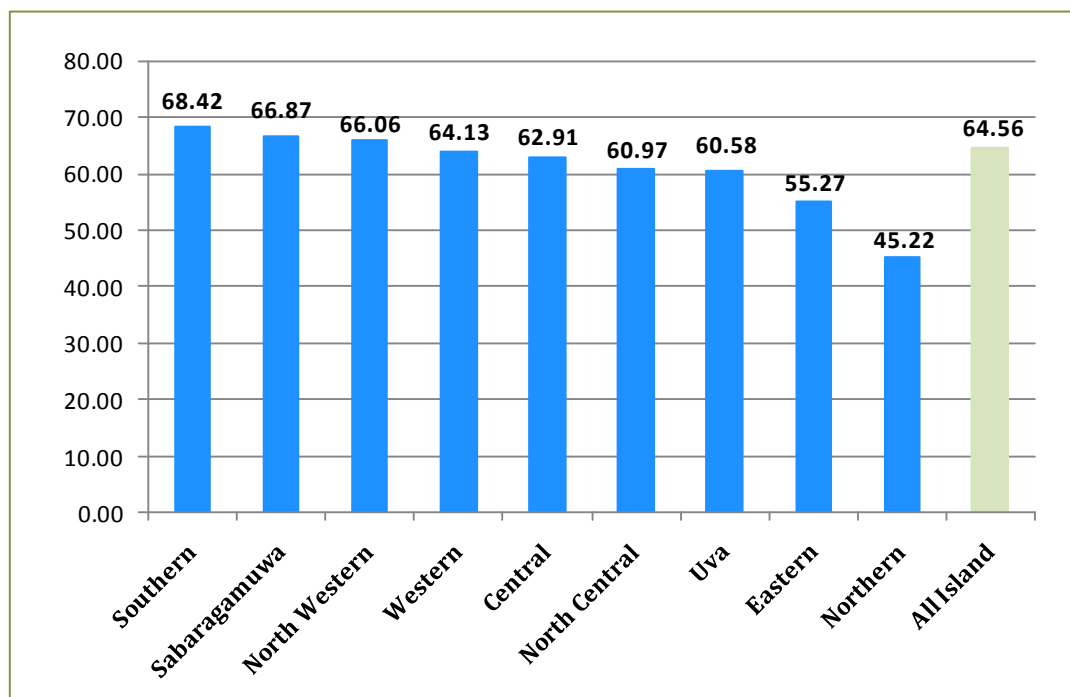These disparities are further highlighted through the bar chart given in Fig. 3.5.

Fig. 3.5: 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. According to Table 3.3, Sabaragamuwa and Central provinces have the lowest SD values even though their mean values are different. Therefore, the deviation of student marks from the mean is less in these provinces. On the other hand, Eastern province has the highest SD value even though the mean value is low. This indicates that while the students' achievement in the province is low the variation of students' marks is the highest in this province. The SD values of Western, Uva, and North Western provinces are also higher than the all island SD value indicating the disparity in achievement within the province and among the provinces.

All the provinces except Northern province have obtained negative skewed values. It is a positive sign that higher number of provinces has achieved higher values (closer to the mean or above). This has contributed to the all island skeweness value to be negative. Sabaragamuwa, North Western and North Central provinces have negative skewed values which are higher than the 0.50 value.

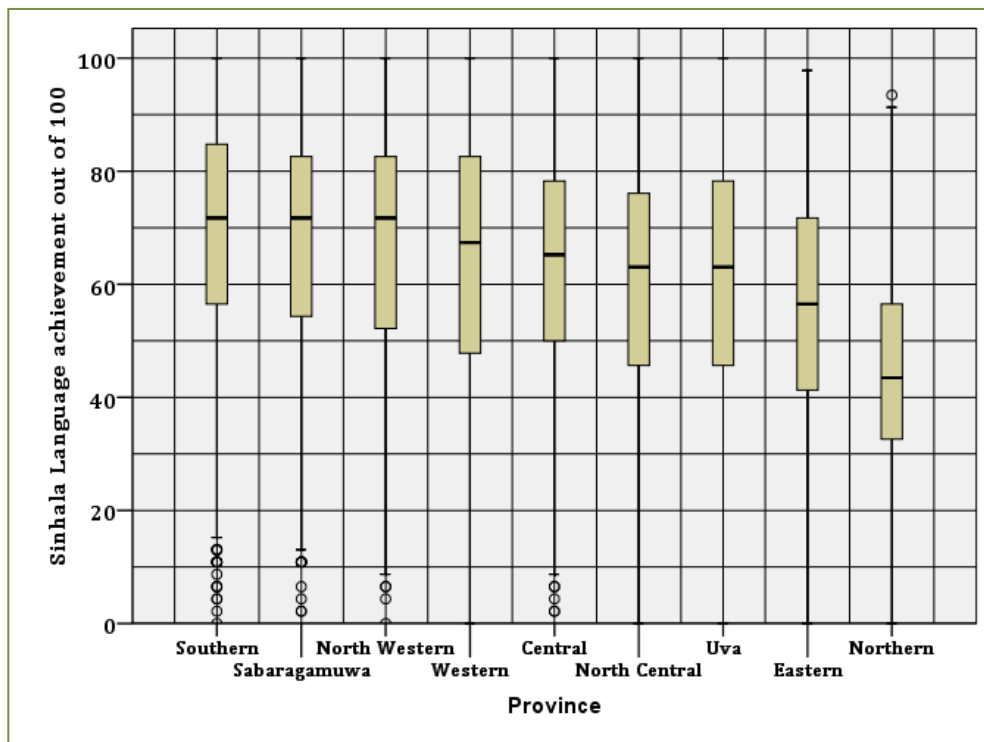The boxplot in Fig. 3.6 graphically illustrates this diversity further.

Fig. 3.6: Provincial wise Sinhala language marks representation using boxplot and whisker plot

Southern, Sabaragamuwa, North Western, Central provinces and 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. However, the performance of the Western province at the 25th percentile is below the all island 25th percentile.

Southern, Sabaragamuwa and North Western provinces have similar median values of 71.739. It reveals that 50% of students have scored higher than the 71.739 mark point. Western province median is equal to the all island median value indicating the contribution of high achievers at this mark range.

The highest 75th percentile score has been obtained by the Southern province indicating its overall high performance. The 75th percentile values of the Sabaragamuwa, North Western and Western provinces are equal to the all island 75th percentile value. On the other hand, the Northern provinces' 75th percentile is even below the 50th percentile of the other provinces.

An interesting finding is that in the three high performing provinces of Southern, Sabaragamuwa and North Western and also in the Central province, there are outliers whose performance does not fit into the general dispersion of marks of the province. Similarly, in the Northern province there is one student who has performed exceptionally well and above the mark range of the province.

Table 3.4 provides the provincial wise percentage of students scoring 50 or above marks.

Table 3.4: Percentage of students scoring 50 or above, and below 50 - Sinhala language

Province	Above or equal to 50	Below 50
Southern	82.90%	17.10%
Sabaragamuwa	82.20%	17.80%
North Western	81.50%	18.50%
Central	76.30%	23.70%
Uva	75.80%	24.20%
Western	75.30%	24.70%
North Central	74.60%	25.40%
Eastern	62.70%	37.30%
Northern	36.00%	64.00%
All Island	**78.20%**	**21.80%**

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

Summary of provincial level analysis – Sinhala language

- In terms of achievement, the provinces fall into three categories.

  Category 1 – Southern, Sabaragamuwa and North Western with mean scores above the national mean (64.56)

  Category 2 – Western, North Central, Uva and Central provinces cluster in the middle.

  Category 3 – Northern and Eastern with the lowest mean values.

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

- In Sabaragamuwa and Central provinces, the disparity of marks is less. Therefore, in these provinces achievement is more homogeneous within the province.

Provincial wise student achievement in the Tamil language would be discussed next.

3.3.2 Provincial wise student achievement – Tamil language

The nature of the distribution of scores in the Tamil language at provincial level reveals certain patterns. First these patterns are discussed using Table 3.5.

Table 3.5: Provincial achievement in Tamil language 2013 –summary statistics

Province	Mean	Rank	Standard Deviation	Standard Error of Mean	skewness	Percentile (p25)=Q1	Median (p50)=Q2	Percentile (p75)=Q3
Northern	62.81	1	24.710	0.180	-0.565	45.65	67.39	82.61
Eastern	60.95	2	27.692	0.172	-0.444	36.96	67.39	84.78
Western	56.72	3	26.496	0.333	-0.252	34.78	58.70	80.43
Uva	55.78	4	27.809	0.456	-0.24	30.43	60.87	80.43
Central	55.28	5	27.007	0.207	-0.145	30.43	58.70	78.26
Sabaragamuwa	54.42	6	25.133	0.389	-0.013	32.61	54.35	76.09
North Central	53.50	7	26.673	0.711	-0.069	28.26	56.52	78.26
North Western	48.02	8	26.651	0.488	0.1	23.91	50.00	69.57
Southern	25.54	9	13.175	0.435	0.702	15.22	22.83	33.70
All Island	**58.28**		**26.979**	**0.095**	**-0.311**	**34.78**	**63.04**	**82.61**

Based on provincial wise mean achievements as indicated in Table 3.5, Northern province ranks first and its mean value is above the all island value as well.

In terms of achievement, the provinces fall into three main categories. Northern and Eastern provinces with mean scores above the national mean, fall into the higher category. Western, Uva, Central, Sabaragamuwa and North Central, cluster in the middle and in these five provinces the mean value is above 50. On the other hand, North Western and Southern province fall into the lowest category. Between the Southern and Northern provinces, there is almost 37 point difference in mean values indicating the disparity in achievement among the provinces.

Compared with the performance in the Sinhala language, disparity in the performance in the Tamil language among provinces is greater.

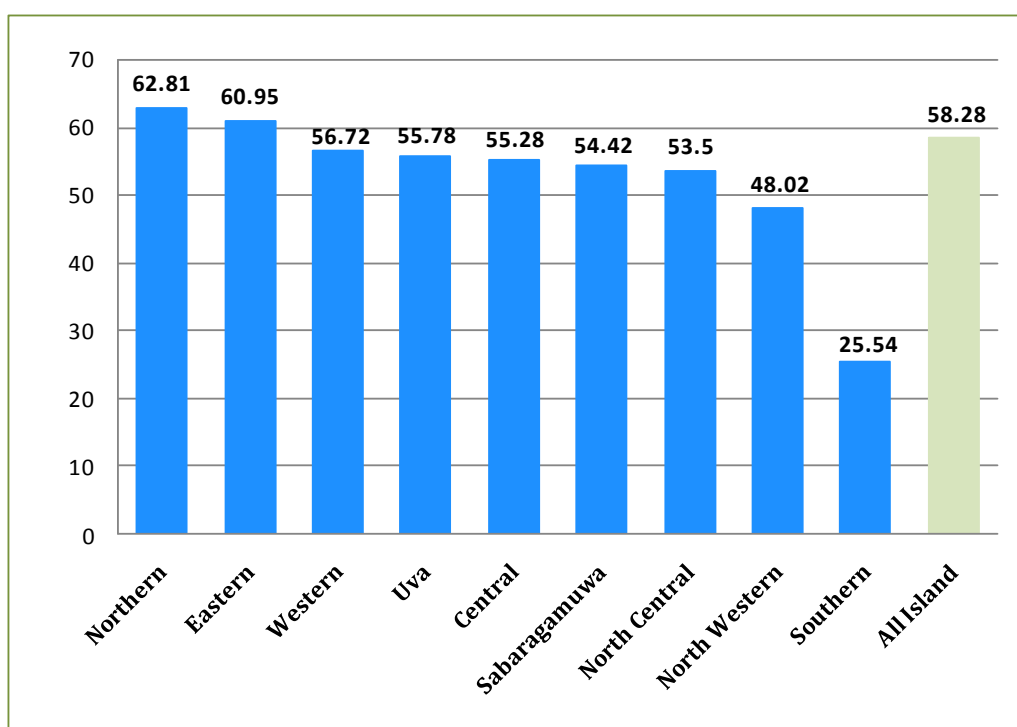These disparities are further highlighted through the bar chart given in Fig. 3.7.

Fig. 3.7: Bar chart to represent mean among the provinces – Tamil language

Disparity in achievement among provinces

According to Table 3.5, Southern province has the lowest SD value and also the lowest mean value. Therefore, the deviation of student marks from the mean is less. Yet this homogeneity of achievement is among low achievers. On the other hand, Uva province has the highest SD value indicating greater variation of students' marks within the province. The SD values of Eastern and Central are also higher than the all island SD value indicating the disparity in achievement within the province and among the provinces. However, the SD value of the Northern province is lower than the all island SD and the mean value is also the highest. Therefore, there is greater homogeneity within the province.

All the provinces have obtained negative skewness values except North Western and Southern provinces. Eastern and Northern provinces have obtained higher negative values than other provinces. This indicates that there are more high achievers in these provinces. This has contributed to the all island skeweness value to be negative.

Fig. 3.8, the boxplot graphically illustrates this diversity further.
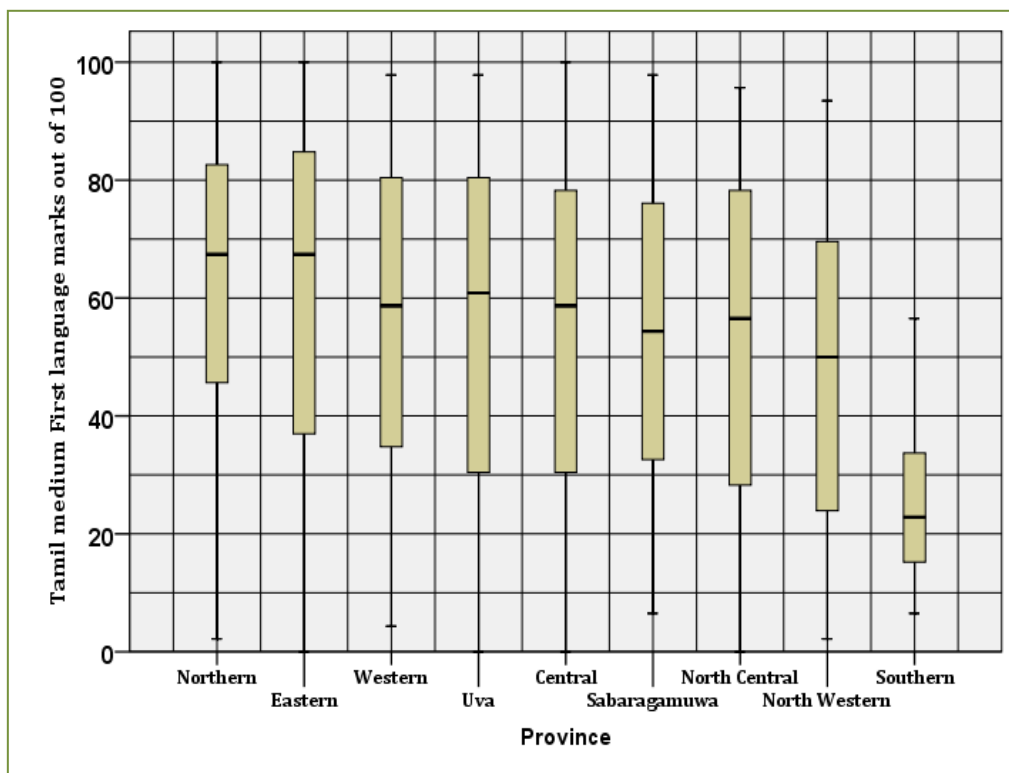

Fig. 3.8: Provincial wise Tamil language marks representation using boxplot and whisker plot

Northern provinces' 25th percentile is very high compared with other provinces. Although Northern and Eastern provinces differ in the 25th percentile, they become equal at the 50th percentile. In the 75th percentile Eastern province has become higher than the Northern province. As the SD of the Northern province indicated, the pattern depicted in the boxplot confirms that the students achievement in the Northern province is more homogeneous while the Eastern province has more high achievers, and greater heterogeneity in achievement.

Table 3.6 provides the provincial wise percentage of students scoring 50 or above marks.

Table 3.6: Percentage of students scoring 50 or above, and below 50 - Tamil language

Province	Above or equal to 50	Below 50
Northern	71.80%	28.20%
Eastern	67.70%	32.30%
Uva	65.70%	34.30%
Sabaragamuwa	60.80%	39.20%
Central	60.50%	39.50%
Western	60.00%	40.00%
North Central	55.10%	44.90%
North Western	53.50%	46.50%
Southern	8.30%	91.70%
All Island	**65.80%**	**34.20%**

The above table confirms that Northern, Eastern and Uva are the three highest performing provinces.

Summary of provincial level analysis – Tamil language

- In terms of achievement the provinces fall into three categories.
  Category 1 – Northern and Eastern with mean scores above the national mean (58.28), fall into the higher category.

Category 2 – Western, Uva, Central, Sabaragamuwa and North Central, cluster in the middle (Mean scores above 50).

Category 3 – North Western and Sabaragamuwa.

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

- In Sabaragamuwa and Central provinces, the disparity of marks is less. Therefore, in these provinces 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

3.4.1 Achievement levels by type of school - Sinhala language

Table 3.7:   Sinhala language achievement according to the school type

School Type	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
1AB	64.78	19.807	0.115	-0.394	50.00	67.39	80.43
1C	63.77	21.265	0.085	-0.583	50.00	67.39	80.43
Type 2	65.02	21.071	0.070	-0.574	50.00	69.57	82.61
Type 3	64.57	21.927	0.081	-0.637	50.00	67.39	82.61
All Island	64.56	21.232	0.042	-0.580	50.00	67.39	82.61

As Table 3.7 indicates, there is not a considerable gap between the mean scores of different school types. However, mean score of Type 2 schools is above that of the other types and also above the national mean. Mean score of all school types, except 1C, is above the national mean. Therefore, the gap between school types in relation to opportunities for "education for all' seems to be narrowing.

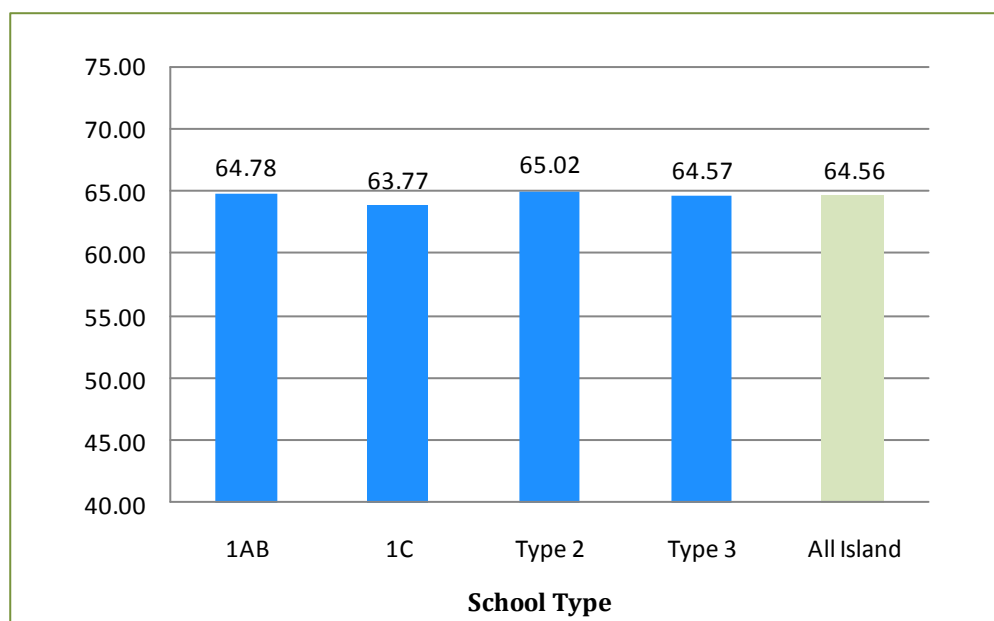The difference in mean scores is graphically shown in Fig. 3.9.

Fig. 3.9: Bar chart representing the mean values according to school types – Sinhala language

The performance of the school types is further highlighted when the median scores are considered in Table 3.7. All school types have achieved a high median value for the achievement in the Sinhala language. It is interesting to note that all school types, except Type 2 schools have obtained identical median values and this is also similar to the all island median value (67.39). However, Type 2 schools' median value is even higher (69.57).

Variation among students

Variation in student achievement in 1AB school type is the lowest. The lowest standard deviation value is shown by 1AB schools (19.807). This value is lower than the all island SD value as well. It reveals that higher number of student marks lies closer to the mean value. Although, the mean and the median values are the highest in Type 2 schools its SD value is also high. Therefore, the dispersion from the mean value is also high.

Disparity in achievement

All school types have obtained negative skewed values. It reveals that in all school types higher number of students have achieved high marks while lower marks are obtained by a lower number of students. Highest skewed value has been obtained by Type 3 schools. Next higher value has been obtained by 1C schools. Both values are above the

all island skewness value. Lowest negative skewed value has been obtained by 1AB schools

The homogeneity of student performance in different types of schools is further highlighted through the frequency distribution graphs.
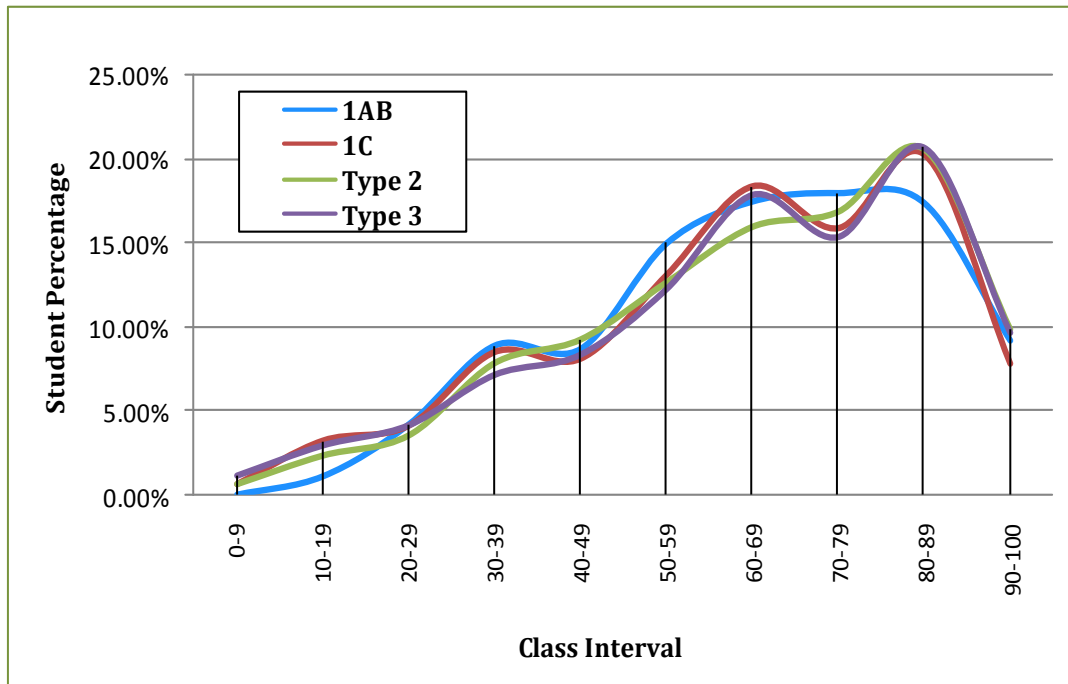

Fig. 3.10: *Dispersion of marks by school type – Sinhala language*

As Fig. 3.10 displays, in the 1AB curve the high performing students' marks are almost equally spread between 60-89 marks. On the other hand, in 1C and Type 3 schools, the curves have two high peaks indicating two groups of high achievers. Their performance is above the 1AB performance. This explains the high negative skewness value of these two types of schools.

On the other hand, even the Type 2 curve peaks above 1AB school type indicating that the high achievers performance is above that of the identical class interval in the 1AB schools.

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

Table 3.8: 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 (%)
90 to 100	9.20%	100.00%	7.80%	100.00%	9.90%	100.00%	9.70%	100.00%
80 to 89	17.40%	90.80%	20.30%	92.20%	20.60%	90.10%	20.70%	90.30%
70 to 79	18.00%	73.40%	15.90%	71.90%	16.90%	69.50%	15.40%	69.60%
60 to 69	17.50%	55.40%	18.40%	56.00%	16.00%	52.60%	17.90%	54.20%
50 to 59	15.00%	37.90%	13.10%	37.60%	12.70%	36.60%	12.30%	36.30%
40 to 49	8.70%	22.90%	8.10%	24.50%	9.30%	23.90%	8.40%	24.00%
30 to 39	8.90%	14.20%	8.50%	16.40%	7.90%	14.60%	7.20%	15.60%
20 to 29	4.20%	5.30%	4.10%	7.90%	3.60%	6.70%	4.20%	8.40%
10 to 19	1.10%	1.10%	3.20%	3.80%	2.40%	3.10%	3.00%	4.20%
0 to 9	0.00%	0.00%	0.60%	0.60%	0.70%	0.70%	1.20%	1.20%
Total	100		100		100		100	

As shown in Table 3.8, the highest percentage of students' marks (18.00%) in 1AB schools falls within the class interval 70-79. On the other hand, in the other three types of schools the highest percentage of marks falls within the class interval 80-89 and the percentages are also higher (20.30%, 20.60% and 20.70%). Hence, the skeweness values of the 1AB curve is less as there are less high achievers compared to the other three school types.

However, when considering the low marks, in 1AB schools there is not a single student who has scored below ten marks. In all other school types, there are a few students who have scored below ten marks. Further, when the percentage of students who has scored below 40 marks is considered, in 1AB schools there are only 14.20%. On the other hand, in 1C and Type 3 schools there is 16.40% and 15.60% respectively. However, in the Type 2 schools, there is only 14.60% of students below the pass mark.

The above Table illustrates that even though over all the gap between the different schools types are narrowing, still there is variation in student achievement within and among school types.

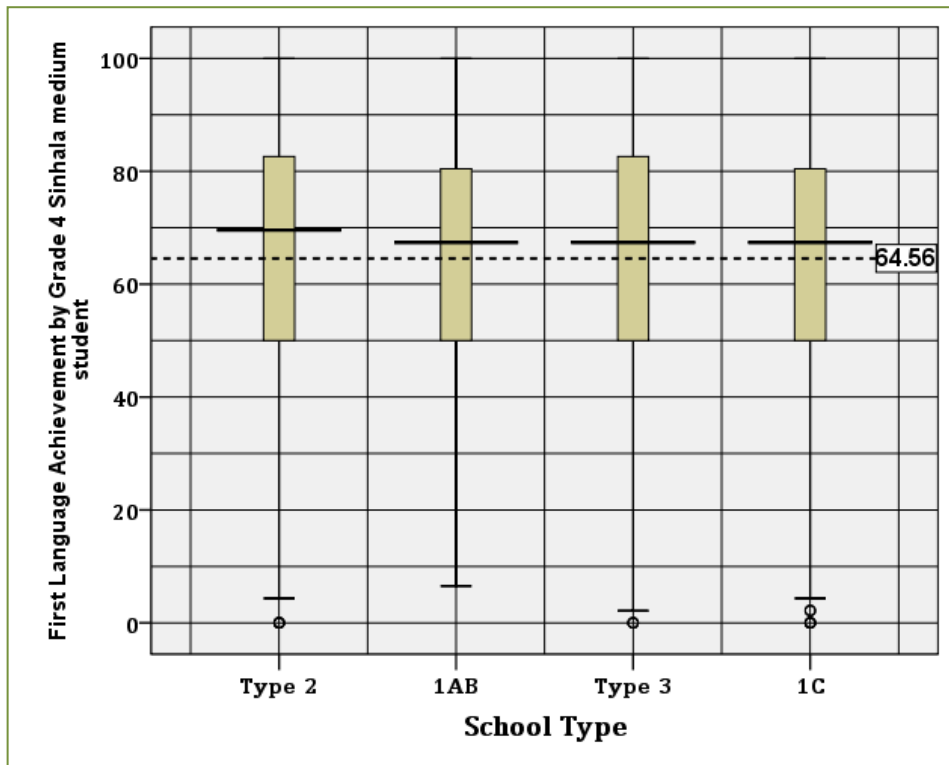This pattern is further illustrated through the boxplot.

Fig. 3.11: Sinhala language marks according to the school types using boxplot and whisker plot

As the boxplot graph indicates, the 25th percentile in all school types are the same. In the 50th percentile only Type 2 schools have a higher value. However, at the 75th percentile value both Type 2 and 3 have equal values and they are higher than both 1AB and 1C school types.

In spite of this high performance in both school types, there are low performing outliers. There are even more low performers in 1C schools where as in 1AB schools the performance is more homogeneous.

Summary

- The achievement in Sinhala language in Type 2 schools is the highest (65.02). 1AB and Type 3 schools performance is relatively similar and closer to the national mean (64.56).
  On the other hand, 1C Type schools performance is below the national mean (63.77)
- The gap in achievement between school types appears to be narrowing.
- However, there is variation within and among school types.

3.4.2 Achievement level by type of school – Tamil language

Table 3.9: Tamil language achievement according to the school type

School Type	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
1AB	63.56	26.081	0.296	-0.498	41.30	71.74	86.96
1C	60.92	26.936	0.220	-0.422	36.96	65.22	84.78
Type 2	55.97	27.352	0.150	-0.224	32.61	58.70	80.43
Type 3	58.14	26.404	0.167	-0.307	36.96	63.04	80.43
All Island	**58.28**	**26.979**	**0.095**	**-0.311**	**34.78**	**63.04**	**82.61**

As Table 3.9 indicates there is variation in achievement among school types. While the achievement level is highest in 1AB schools, it is lowest in Type 2 schools. Further, the mean value of Type 2 schools is lower than the all island mean value.

The difference in mean values is also shown graphically in the bar chart in Fig. 3.12
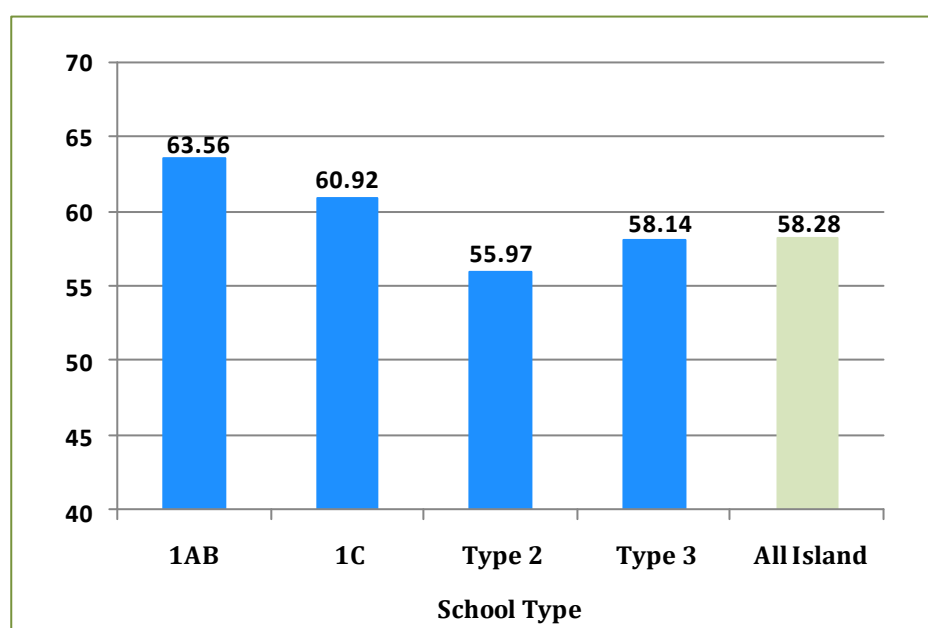

Fig. 3.12: Bar chart representing the mean values according to school types – Tamil language

The performance of the school types is further highlighted when the median scores are considered in Table 3.9. All school types have achieved median values above the national mean for the Tamil language.

Variation among students

Variation in student achievement in 1AB schools is the lowest. The lowest standard deviation values are shown by 1AB schools (26.081). This value is lower than the all island SD value as well. The SD values of 1C and Type 3 schools are also below the all island SD value. However, in all school types the SD value is quite high indicating that there is greater variation from the mean. In Type 2 schools, while the mean value is the lowest its SD value is high. Therefore, there is greater variation among low achievers.

Disparity in achievement

All school types have obtained negative skewed values. It reveals that in all school types higher number of students have achieved high marks while lower marks are obtained by a lower number of students. Highest skewed value has been obtained by 1AB schools. Next higher value has been obtained by 1C schools. Both values are above the all island skewness value. Lowest negative skewed value has been obtained by Type 2 schools.

The variation among school types is further indicated through the line curve displaying the dispersion of marks (Fig. 3.13).
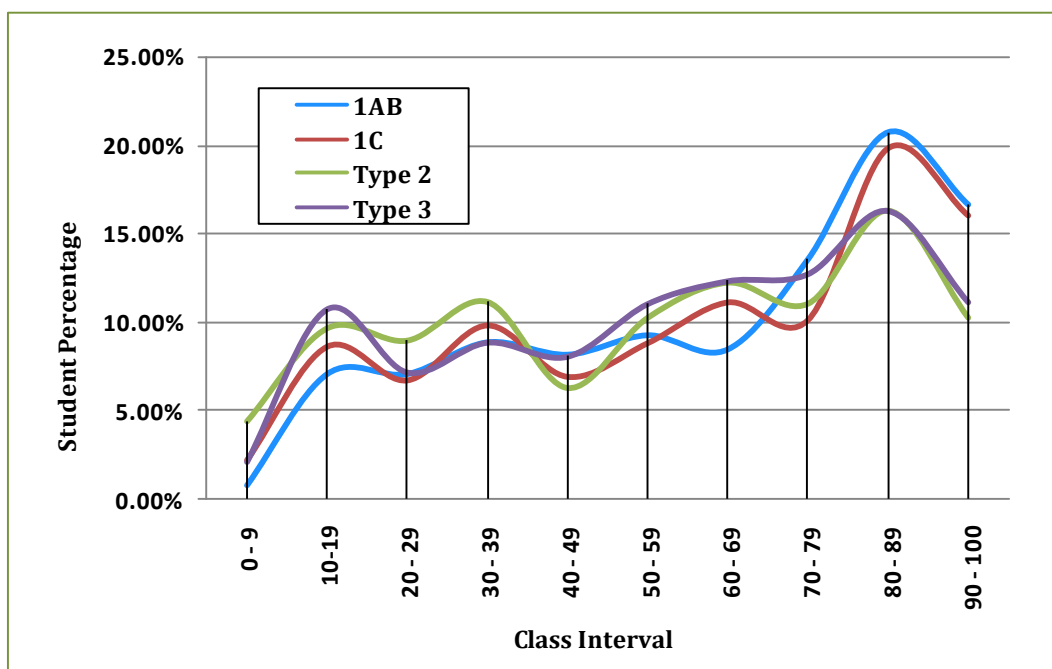

Fig. 3.13: Dispersion of marks by school type – Tamil language

All curves are negatively skewed indicating that there are more high achievers than low achievers. However, when the highest peaks are considered the 1AB and 1C curves are similar. Further, the highest peaks of Type 2 and Type 3 are identical.

The patterns of these curves are further elaborated in the cumulative percentage Table.

Table 3.10: Cumulative student percentages according to school type – Tamil language

Class Interval	1AB		1C		Type 2		Type 3	
	Student (%)	Cumulative (%)	Student (%)	Cumulative (%)	Student (%)	Cumulative (%)	Student (%)	Cumulative (%)
90 to 100	16.60%	100.00%	16.00%	100.00%	10.20%	100.00%	11.10%	100.00%
80 to 89	20.70%	83.40%	19.80%	84.00%	16.30%	89.80%	16.30%	88.90%
70 to 79	13.50%	62.70%	10.10%	64.20%	11.00%	73.50%	12.70%	72.60%
60 to 69	8.40%	49.20%	11.10%	54.10%	12.20%	62.50%	12.30%	59.90%
50 to 59	9.20%	40.80%	8.80%	43.00%	10.20%	50.30%	11.00%	47.60%
40 to 49	8.10%	31.60%	6.90%	34.20%	6.20%	40.10%	8.00%	36.60%
30 to 39	8.80%	23.50%	9.80%	27.30%	11.10%	33.90%	8.80%	28.60%
20 to 29	7.00%	14.70%	6.70%	17.50%	8.90%	22.80%	7.10%	19.80%
10 to 19	7.00%	7.70%	8.60%	10.80%	9.60%	13.90%	10.70%	12.70%
0 to 9	0.70%	0.70%	2.20%	2.20%	4.30%	4.30%	2.00%	2.00%

As Table 3.10 indicates in both Type 2 and Type 3 schools, the highest percentage of students (16.30) belongs to the class interval 80-89. On the other hand, in 1AB and 1C schools too, the highest percentage of students belongs to the same class interval. However, the percentage is greater in these two school types (20.70% and 19.80%).

The percentage of students who has scored less than the pass mark (40%) is considered the 1AB schools have the lowest percentage. On the other hand, the highest percentage is (33.90%) in Type 2 schools.

Therefore, it could be concluded that in all school types, there is greater heterogeneity among low performers than among high performers.

This pattern of performance among different school types is further illustrated through the boxplot in Fig. 3.14.
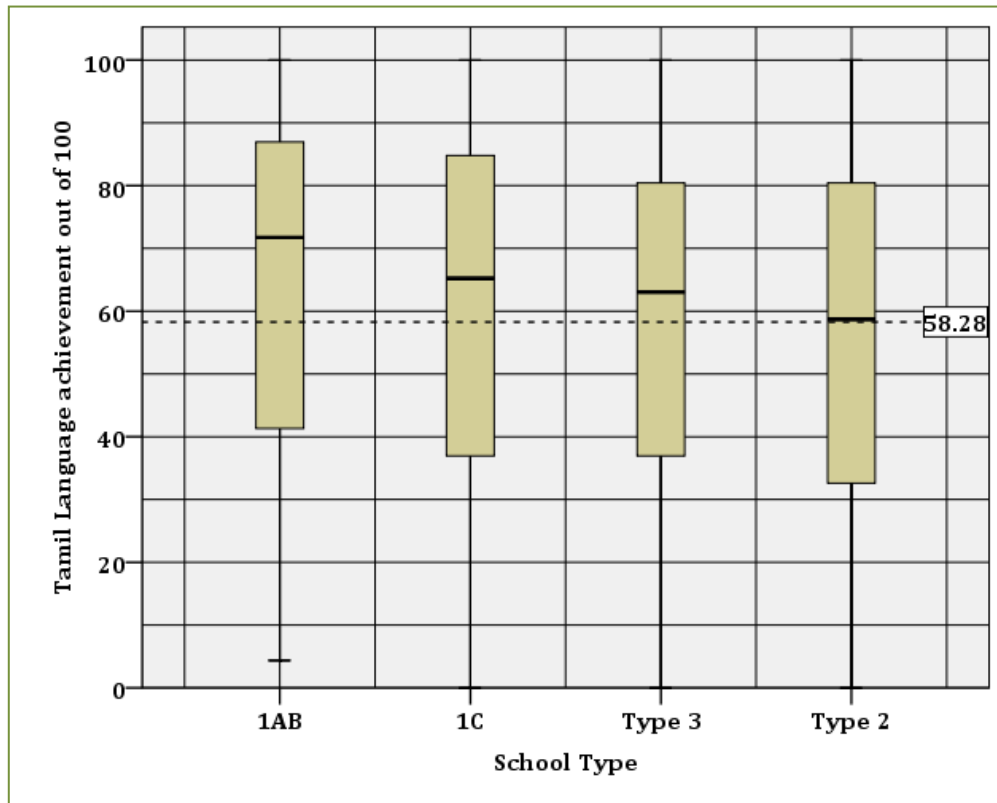
Fig. 3.14*: Tamil language marks according to the school types using boxplot and whisker plot*

When compared with the performance in Sinhala language there are differences in achievement in the two languages. Whereas the highest mean value for Sinhala language was observed in Type 2 schools, for Tamil language the lowest performance was observed in Type 2 schools. On the other hand, student achievement is more homogeneous in 1AB schools for both Sinhala and Tamil.

Summary

- Performance is highest in 1AB schools (63.56).
- Variation in student achievement is also lowest in 1AB schools.
- Performance is lowest in Type 2 schools while variation is highest in these schools.

3.5   Achievement levels by gender

3.5.1 Achievement levels by gender – Sinhala language

Table 3.11:   Sinhala language achievement according to the gender

Student Gender	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Female	68.90	19.41	0.06	-0.73	56.52	71.74	84.78
Male	60.48	22.05	0.06	-0.42	43.48	63.04	78.26
All Island	**64.56**	**21.23**	**0.04**	**-0.58**	**50.00**	**67.39**	**82.61**

There is a difference in the achievement of females over males. As Table 3.11 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. 3.15

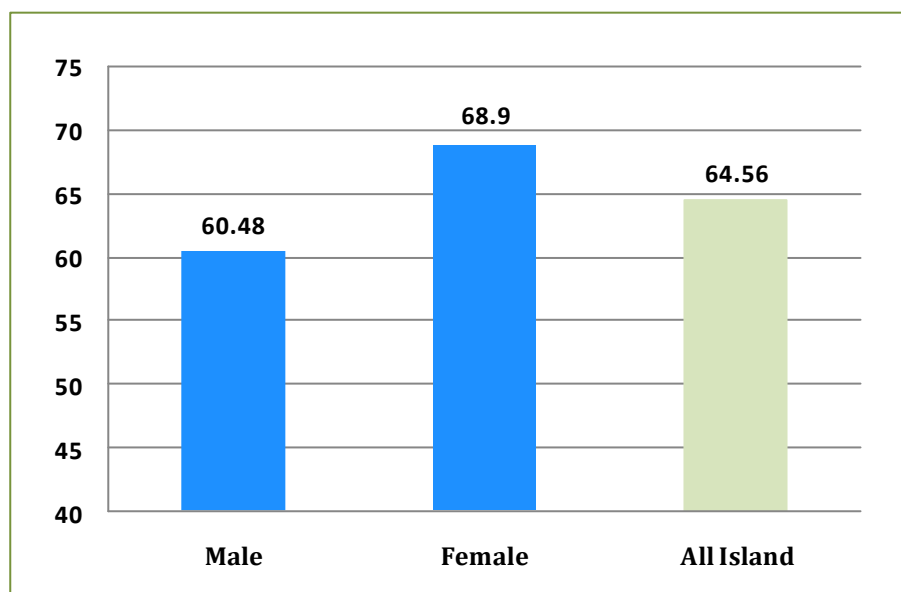*Fig. 3.15: Bar chart representing mean values according to gender – Sinhala language*

Variation among students

Variation in achievement among males is higher than that of the female students. This is indicated by the male students obtaining a higher SD value than the female students as well as the all island SD (Table 3.11). On the other hand, the SD of female students is below the all island SD.

Fig. 3.16 graphically illustrates the dispersion of marks according to gender
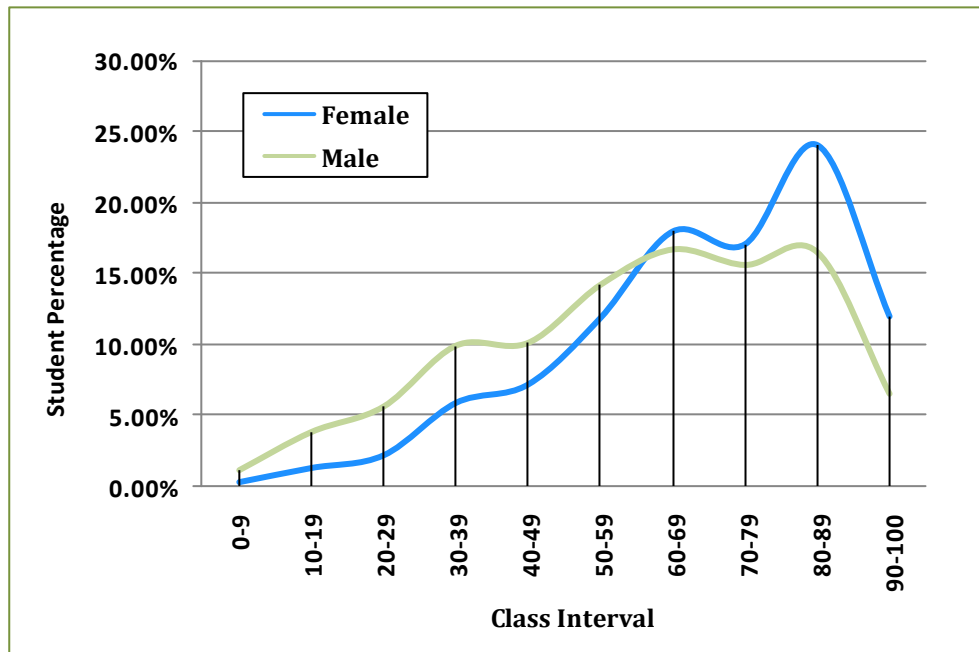
Fig. 3.16: Dispersion of marks by gender – Sinhala language

Disparity in achievement

Fig. 3.16 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 more high achievers among the females.

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

Table 3.12: Gender wise cumulative percentages – Sinhala language

Class Interval	Female (%)	Cumulative Percentage	Male (%)	Cumulative Percentage
90 to 100	12.00%	100.00%	6.50%	100.00%
80 to 89	24.10%	88.00%	16.50%	93.50%
70 to 69	17.10%	63.90%	15.60%	77.00%
60 to 69	18.00%	46.80%	16.70%	61.40%
50 to 59	11.90%	28.80%	14.20%	44.70%
40 to 49	7.20%	16.90%	10.10%	30.50%
30 to 39	5.90%	9.70%	9.90%	20.40%
20 to 29	2.20%	3.80%	5.60%	10.50%
10 to 19	1.30%	1.60%	3.80%	4.90%
0 to 9	0.30%	0.30%	1.10%	1.10%
Total	100.00%		100.00%	

According to Table 3.12 and Fig. 3.16 it could be concluded that, there are more high performing female students than male students. The highest percentage (24.10%) of female students' fall into the class interval 80-89. On the other hand, the highest percentage of male students, (16.70%) falls into the class interval 60-69.

Even though there are only 9.70 cumulative percent of female students who has scored below 40 marks, there are 20.40% of male students who has scored less than 40 marks. Therefore, the overall achievement in Sinhala of the boys is lower than that of the girls.

Boxplot and whisker chart for gender wise Sinhala language achievement elaborates the performance further.
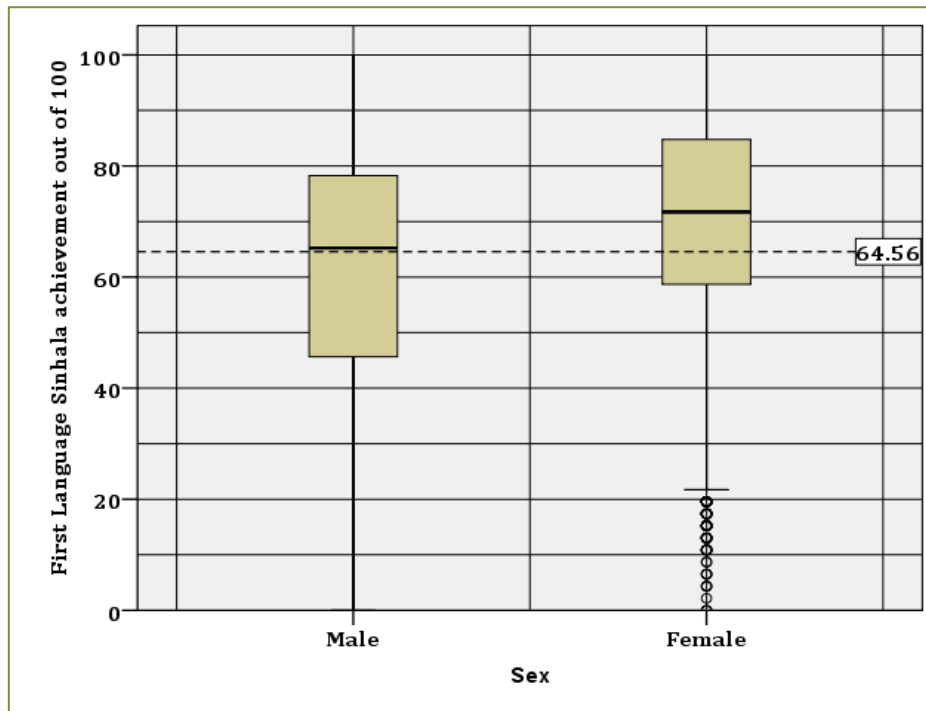
Fig. 3.17: Boxplot and whisker plot representing Sinhala language marks according to gender

Boxplot and whisker chart shows that female students' marks dispersion is higher than the male students. Fifty percent of male students' achievement lie below the female students' achievement. Median of the male students also lies 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 has scored 64.56, fifty percent of female students has scored above 64.56.

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

However, as the boxplot depicts there are some students, who compared with the majority, are very low performing. These outliers' achievement is below the mark range of the other female students.

Summary
- Female performance is better than all island and male performance.
- While only 9.70% of girls have scored below 40, the male percentage is 20.40%.

- Highest percentage of females (24.10%) falls within the mark range 80-89. On the other hand, among the males the highest percentage belongs to a lower mark range 60-69. Yet it is lower (16.70%) than the female highest percentage.

- However, among girls there are a few low performing outliers.

Students' achievement in relation to Tamil language, gender wise will be discussed next.

3.5.2 Achievement levels by gender – Tamil language

Table 3.13: Tamil language achievement according to the gender

Student Gender	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Female	63.00	25.945	0.131	-0.511	41.30	69.57	84.78
Male	53.82	27.179	0.133	-0.129	30.43	54.35	78.26
All Island	**58.28**	**26.979**	**0.095**	**-0.311**	**34.78**	**63.04**	**82.61**

There is a considerable difference in achievement in the Tamil language between males and females. As Table 3.13 indicates, this difference is almost ten points.

Further the male performance (53.82) is also below the all island mean (58.28).

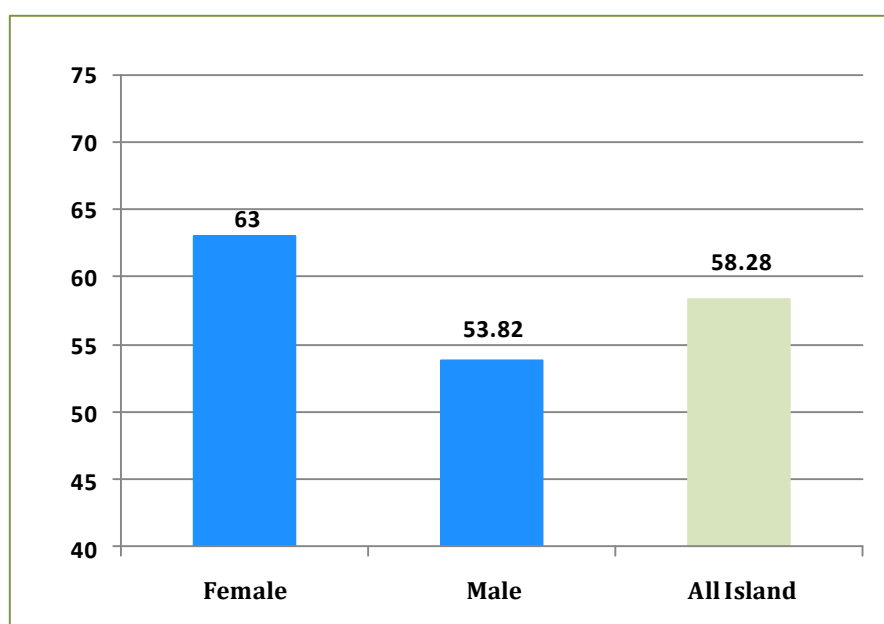These differences are further illustrated in Fig. 3.18.

Fig. 3.18: Bar chart representing mean values according to gender- Tamil language

Variation among students

Variation in achievement among males is higher than that of the female students. This is indicated by the male students obtaining a higher SD value than the female students as well as the all island SD (Table 3.13). On the other hand, the female students SD is below the all island SD.

Fig. 3.19 graphically illustrates the dispersion of marks according to gender.
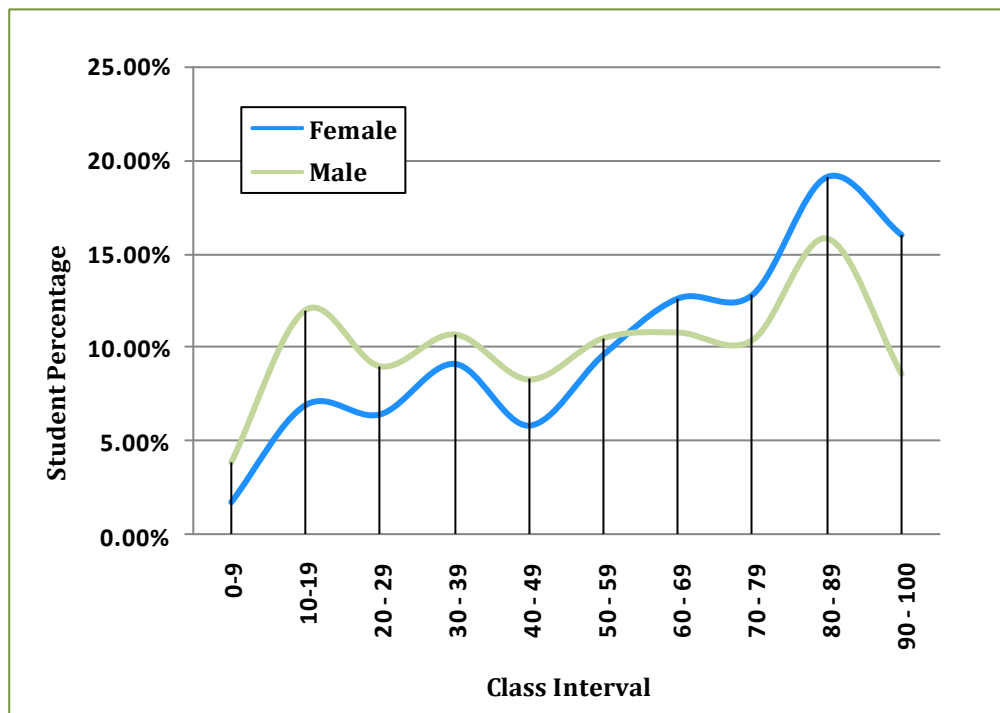
Fig. 3.19: Dispersion of marks by gender –Tamil language

The two line curves for males and females are negatively skewed. However, both curves have two high peaks. While one peak corresponds with highest number of low achievers, the other denotes the highest number of high achievers. Therefore, there are both high achievers and low achievers among both males and females.

However, when the two high peaks are considered the one towards the right corresponding to high achievers is higher than the one towards the left representing the low achievers. Therefore, the number of high achievers is greater than the number of low achievers. Further, when the two lines are considered the green line denoting the

male performance is higher at the lower end, the female performance is higher at the higher end. This pattern indicates that while the low performers among the boys are greater, among the girls high performers are greater.

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

Table 3.14: Gender wise cumulative percentages – Tamil language

Class Interval	Female (%)	Cumulative Percentage	Male (%)	Cumulative Percentage
90 to 100	16.00%	100.00%	8.60%	100.00%
80 to 89	19.10%	84.00%	15.80%	91.40%
70 to 79	12.80%	64.90%	10.40%	75.60%
60 to 69	12.60%	52.10%	10.80%	65.20%
50 to 59	9.60%	39.50%	10.50%	54.40%
40 to 49	5.80%	29.90%	8.30%	43.90%
30 to 39	9.10%	24.10%	10.70%	35.60%
20 to 29	6.40%	15.00%	9.00%	24.90%
10 to 19	6.90%	8.60%	12.00%	15.90%
0 to 9	1.70%	1.70%	3.90%	3.90%
Total	100.00%		100.00%	

According to Table 3.14 and Fig. 3.19 it could be concluded that, there are more high performing female students than male students. The highest percentage (19.10%) of female students falls into the class interval 80-89. Even though, the highest percentage of male students also falls into the class interval 80-89, the percentage is less (15.80%). Further, there are also 16.00% of females who has scored between 90-100, there are only 8.60% of boys who has scored between 90-100. This supports the claim that there are more high achievers among the females than among the males.

On the other hand, while there are only 24.10 cumulative percent of female students who has scored below 40 marks, there are 35.60% of male students who has scored less than 40 marks. Therefore, the overall achievement in Tamil language of the boys is lower than the girls.

Boxplot and whisker chart for gender wise Tamil language achievement elaborates the performance further.
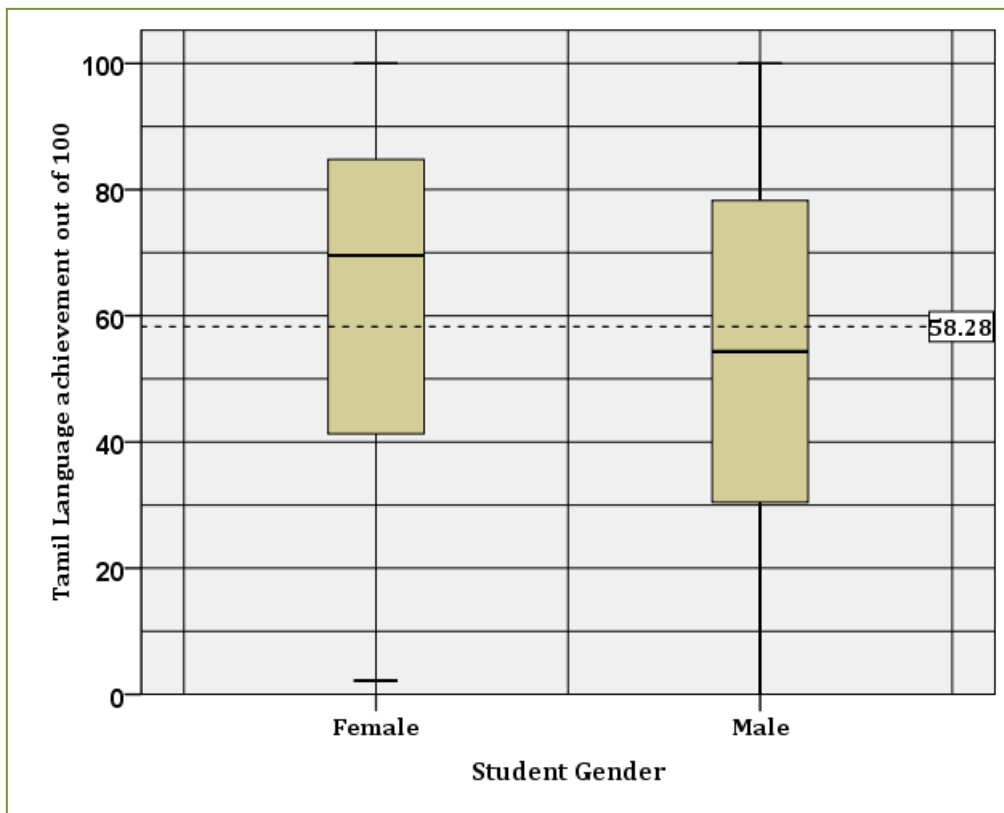
Fig. 3.20: Boxplot and whisker plot representing Tamil language marks according to gender

Boxplot and whisker chart shows that female students' marks dispersion is higher than the male students. Fifty percent of male students' achievements lies below the female students' achievement. Median of the male students also lies close to the all island mean value line, where as the female students median is higher than the all island mean.

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

Summary

- Female students' achievement is higher than male students' achievement
- There are more high achievers among girls than among boys.

Student achievement by location would be discussed next.

3.6   Achievement levels by location

School census classifies the location of the schools according to whether a particular school is located in a municipal council, urban council or pradeshiyasaba area. Hence this analysis is first based on that classification.

3.6.1 Analysis of achievement by location – Sinhala language

Table 3.15:   Sinhala language achievement according to the location

Location	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Municipal Council	63.19	21.78	0.11	-0.50	47.83	67.39	80.43
Urban Council	67.71	20.79	0.13	-0.81	56.52	71.74	84.78
Pradeshiyasaba	64.42	21.14	0.05	-0.57	50.00	67.39	80.43
All Island	**64.56**	**21.23**	**0.04**	**-0.58**	**50.00**	**67.39**	**82.61**

As Table 3.15 indicates, there is variation in achievement among the schools in the different localities. The schools in urban council area have performed best. On the other hand, the lowest performance is recorded in schools in the municipal council areas. Both municipal and pradeshiyasaba schools have performed below the national mean.

The difference in mean values is graphically shown in Fig. 3.21.
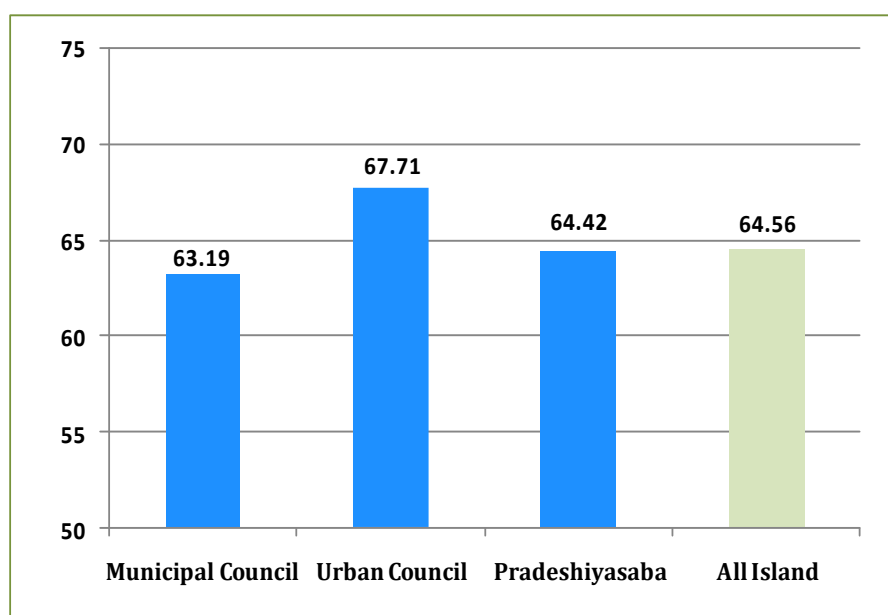
Fig. 3.21: Bar chart representing mean values according to location – Sinhala language

As Fig. 3.21 indicates, the mean values of schools in municipal council areas are lower than the schools in the pradeshiyasaba areas. However, these differences are minimal. On the other hand, when the median values given in Table 3.15 are considered, in the urban area schools, the median is higher than in the other schools. On the other hand, the median values for the other two locations are similar to the all island median value.

The deviation of the marks from the mean according to Table 3.15 appears to be quite close to each other in the municipal and pradeshiyasaba area schools while it is slightly less in the urban council area schools.

The dispersion of marks according to location, further illustrates this disparity.
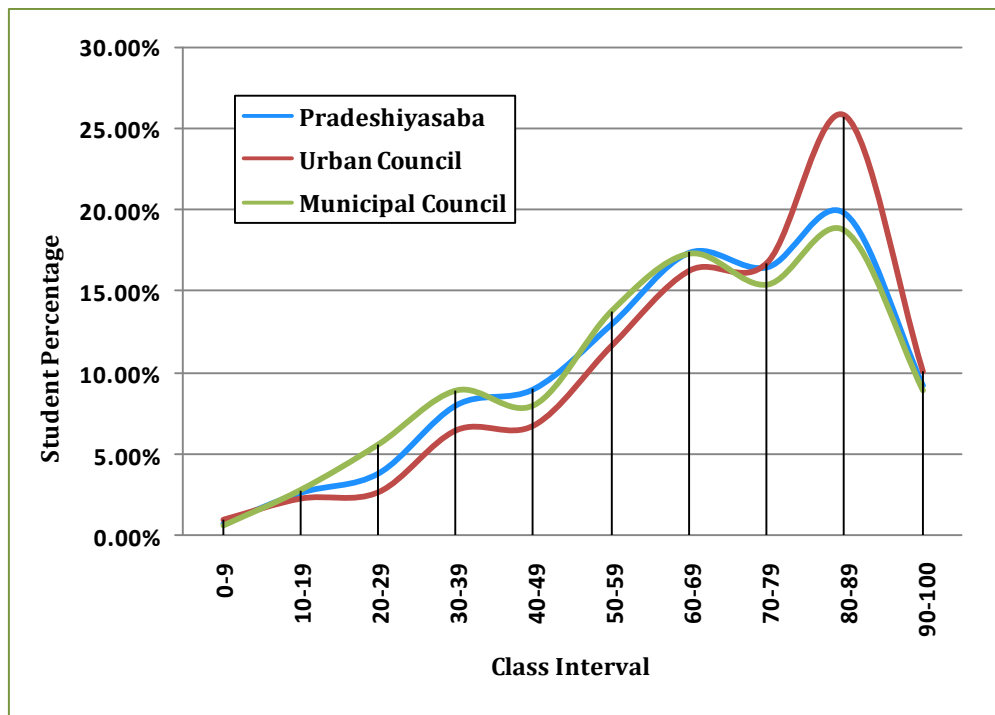
Fig. 3.22: Dispersion of marks according to location – Sinhala language

Fig. 3.22 displays three 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 pradeshiyasaba schools and the municipal council area schools are quite similar while the high achievers in the urban council area schools are higher.

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

Table 3.16: Location wise cumulative percentage – Sinhala language

| Class Interval	Municipal Council		Urban Council		Pradesiyasaba	
	Student %	Cumulative %	Student %	Cumulative %	Student %	Cumulative %
90 to 100	8.90%	100.00%	10.10%	100.00%	9.20%	100.00%
80 to 89	18.70%	91.10%	25.80%	89.90%	19.80%	90.80%
70 to 79	15.40%	72.40%	16.80%	64.10%	16.50%	71.00%
60 to 69	17.30%	57.00%	16.30%	47.30%	17.40%	54.50%
50 to 59	13.80%	39.70%	11.70%	31.00%	13.00%	37.10%
40 to 49	8.00%	25.90%	6.80%	19.30%	9.00%	24.10%
30 to 39	8.90%	17.90%	6.50%	12.50%	8.00%	15.10%
20 to 29	5.60%	9.00%	2.70%	6.00%	3.80%	7.10%
10 to19	2.80%	3.40%	2.30%	3.30%	2.60%	3.30%
0 to 9	0.60%	0.60%	1.00%	1.00%	0.70%	0.70%
Total	100.00%		100.00%		100.00%	

According to Table 3.16 and Fig. 3.22 it could be concluded that, there are more high performing students in the urban council area schools. The highest percentage (25.80%) of students falls into the class interval 80-89. Even though, the highest percentage of students in the pradeshiyasaba schools also falls into the class interval 80-89, the percentage is less (19.80%). This percentage is even less (18.70%) in municipal area schools.

On the other hand, while there are only 12.50 cumulative percent of students in the urban council area schools who have scored below 40 marks, there are 17.90% of students who have scored less than 40 marks in the municipal council area schools. Therefore, the overall achievement in Sinhala language of the students in the urban area schools is higher than the students in the municipal council area schools.

Boxplot and whisker chart for location wise Sinhala language achievement elaborates the performance further.
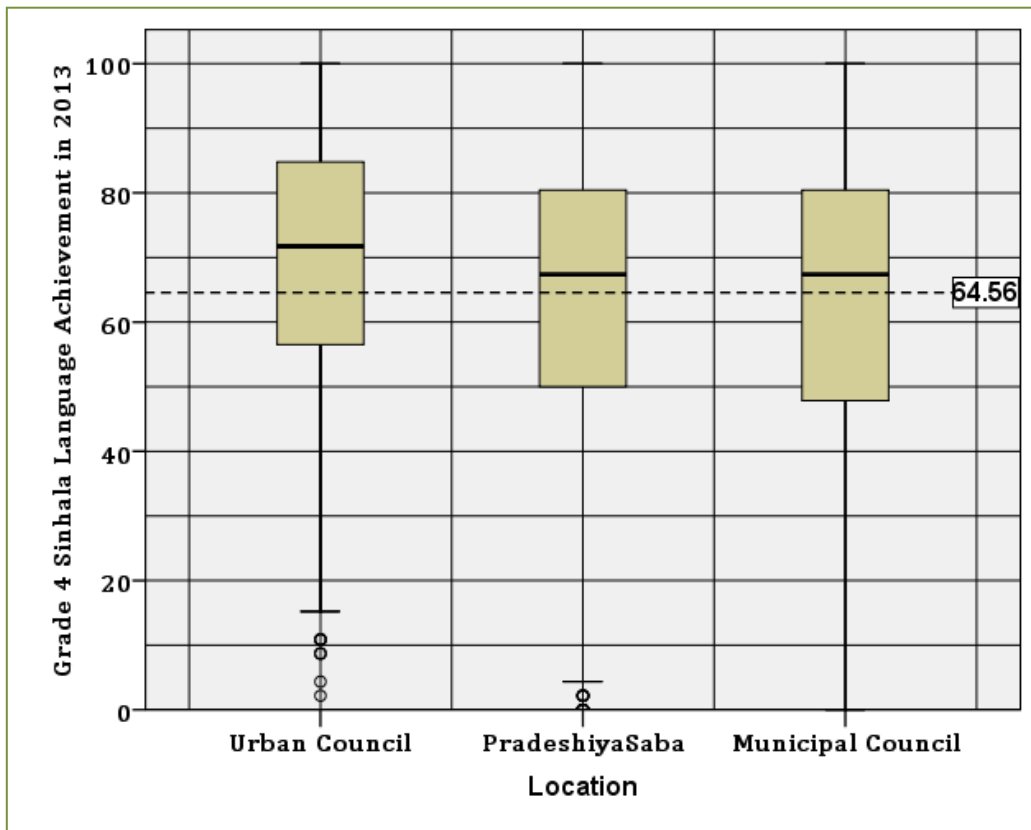
Fig. 3.23: Boxplot for location – Sinhala language

As the boxplots in Fig. 3.23 indicates the median values of all school types are above the all island mean value. However, it is interesting to note that even though student performance is highest at all percentiles in the urban area schools, there are also outliers. These outliers' performance is below the normal marks range for this locality. Similar outliers can be seen in the schools of pradeshiyasaba areas as well. On the other hand, even though the performance is lowest in the municipal council area schools they do not have low achieving outliers.

The Table 3.17 indicates the summary statistics considering the locality as urban and rural. In this analysis both urban council and municipal council schools have been considered as urban and pradeshiyasaba schools as rural.

Table 3.17: Sinhala language achievement according to urban/rural demarcation

Location	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Urban	64.98	21.51	0.09	-0.62	50.00	69.57	82.61
Rural	64.42	21.14	0.05	-0.57	50.00	67.39	80.43
All Island	64.56	21.23	0.04	-0.58	50.00	67.39	82.61

According to Table 3.17, there is not much difference in the performance of students in urban and rural schools. Further, the SD is also quite similar in the two school types indicating that deviation of marks from the mean is similar.

Similarity in performance is further illustrated in the bar graph denoting the mean values in Fig. 3.24.

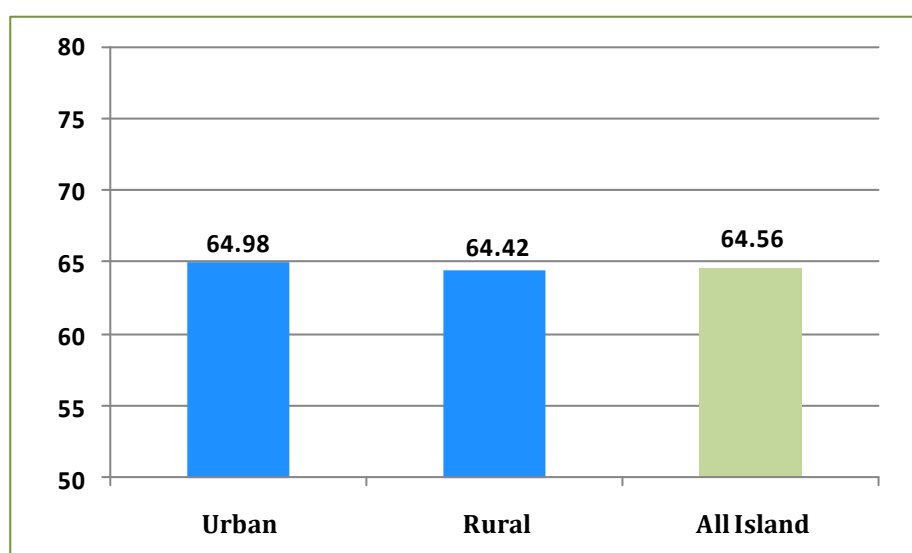*Fig. 3.24: Bar chart representing mean values according to location (Urban/Rural) – Sinhala language*

Summary

- Highest achievement can be seen in the urban council area schools and their mean value (67.71) is above the all island mean value.
- The lowest achievement is in the municipal council area schools. However, their mean value (63.19) is closer to the mean value (64.42) of pradeshiyasaba schools.

- Low performing outliers can be seen in both urban and pradeshiyasaba schools but not in the municipal council area schools.

- There is not much difference in students' performance in urban and rural area schools.

3.6.2 Analysis of achievement by location – Tamil language

Table 3.18:   Tamil language achievement according to the location

Location	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Municipal Council	67.00	22.910	0.246	-0.674	50.00	73.91	84.78
Urban Council	67.88	25.406	0.279	-0.725	47.83	76.09	89.13
Pradeshiya saba	55.87	27.165	0.107	-0.209	32.61	58.70	80.43
All Island	**58.28**	**26.979**	**0.095**	**-0.311**	**34.78**	**63.04**	**82.61**

As Table 3.18 indicates, there is variation in achievement among the schools in the different localities. The urban council area schools have performed the best. However, there is not much difference in the mean values of urban and municipal council area schools and their mean values are above the national mean. On the other hand, the lowest performance is recorded in the pradeshiyasaba area schools and their performance is below the national mean.

The difference in mean values is graphically shown in Fig. 3.25.
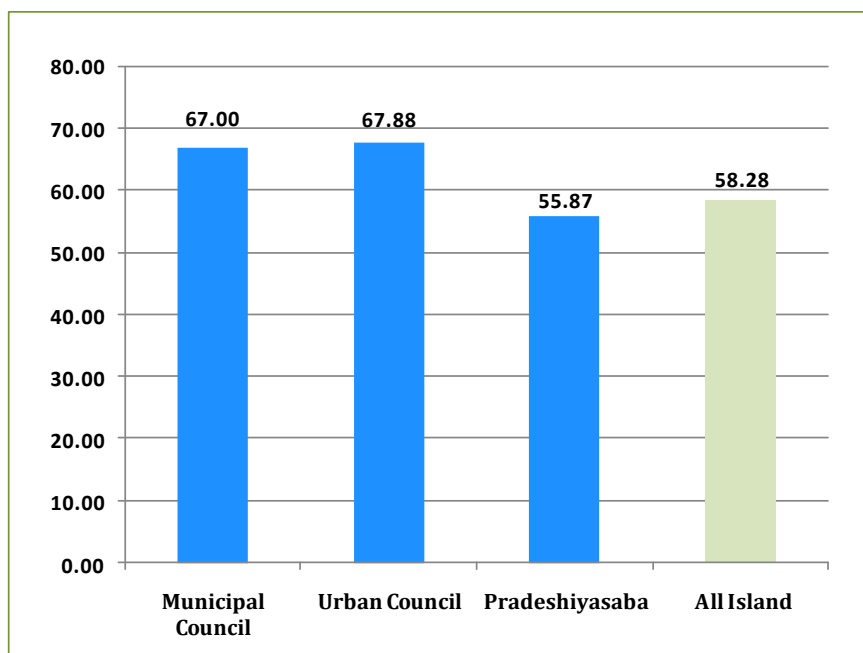
Fig. 3.25: Bar chart representing mean values according to location – Tamil language

As Fig. 3.25 indicates, the mean values in the municipal area schools are lower than in the schools in the urban council areas. However, these differences are minimal. On the other hand, when the median values given in Table 3.18 are considered, in the urban area schools the median is higher than in the other two locality schools. The median value is lowest in the pradeshiyasaba area schools.

The deviation of the marks from the mean according to Table 3.18 is quite high in the pradeshiyasaba area schools (27.165). Even in the urban area schools the SD is high (25.41) even though it is below the national SD, (26.98) which is also high. Therefore, the deviation of the marks from the mean in Tamil schools in both the urban council areas as well as in the pradeshiyasaba areas are high. On the other hand, in the municipal council area schools, the SD is lower than in the other two localities (22.91), indicating lesser variation.

The dispersion of marks according to location, further illustrates this disparity.
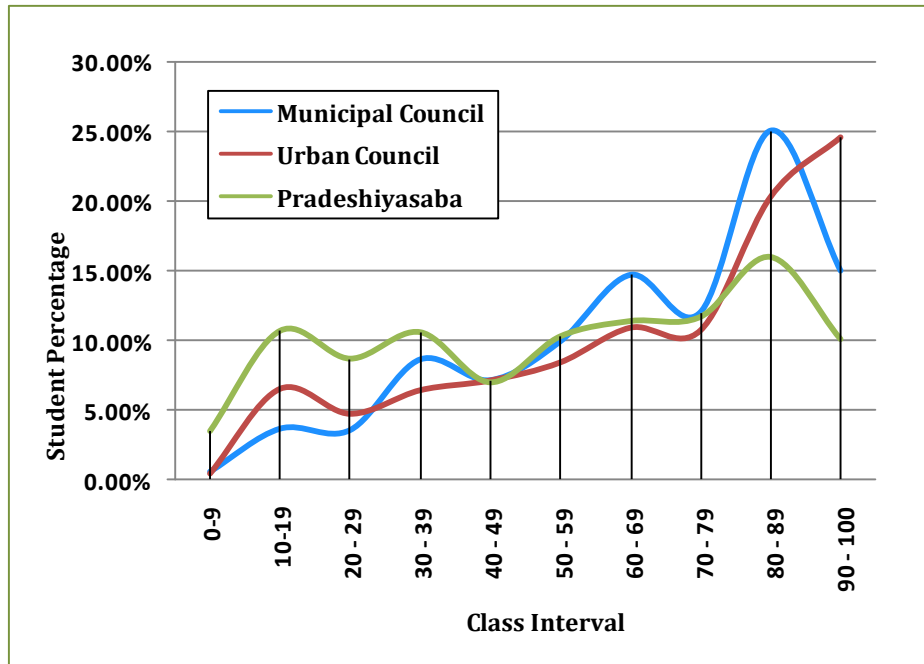
Fig. 3.26: Dispersion of marks according to location – Tamil language

Fig. 3.26 displays three 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 urban council and the municipal council area schools are high while the performance in the pradeshiyasaba schools is lower. However, the patterns of the urban council area schools and the municipal council area schools' curves differ.

These differences can be further illustrated in the cumulative percentage table.

Table 3.19: Location wise cumulative percentage – Tamil language

Class Interval	Municipal Council		Urban Council		Pradesiyasaba	
	Student %	Cumulative %	Student %	Cumulative %	Student %	Cumulative %
90 to 100	15.00%	100.00%	24.60%	100.00%	10.10%	100.00%
80 to 89	25.10%	85.00%	20.30%	75.40%	16.00%	89.90%
70 to 79	12.00%	59.90%	10.70%	55.10%	11.70%	73.90%
60 to 69	14.70%	47.90%	10.90%	44.40%	11.40%	62.20%
50 to 59	9.90%	33.20%	8.40%	33.50%	10.30%	50.80%
40 to 49	7.10%	23.30%	7.10%	25.10%	7.00%	40.50%
30 to 39	8.60%	16.20%	6.40%	18.00%	10.60%	33.50%
20 to 29	3.50%	7.60%	4.70%	11.60%	8.70%	22.90%
10 to19	3.60%	4.10%	6.50%	6.90%	10.70%	14.20%
0 to 9	0.50%	0.50%	0.40%	0.40%	3.50%	3.50%
Total	100.00%		100.00%		100.00%	

As Table 3.19 indicate the highest percentage of students in the municipal council area schools and pradeshiyasaba schools fall into the class interval 80-89. On the other hand, even though there is 20.30% of students in the urban council area schools falling into this class interval, a higher percentage of (24.60%) students also fall into the class interval 90 – 100.

On the other hand, while there is 16.20% of students scoring below 40% in municipal council area schools, in the urban council area schools, there is 18% of students who have obtained less than 40%. Thus, there is greater variation in achievement in urban council area schools.

Boxplot and whisker chart for location wise Tamil language achievement elaborates the performance further.
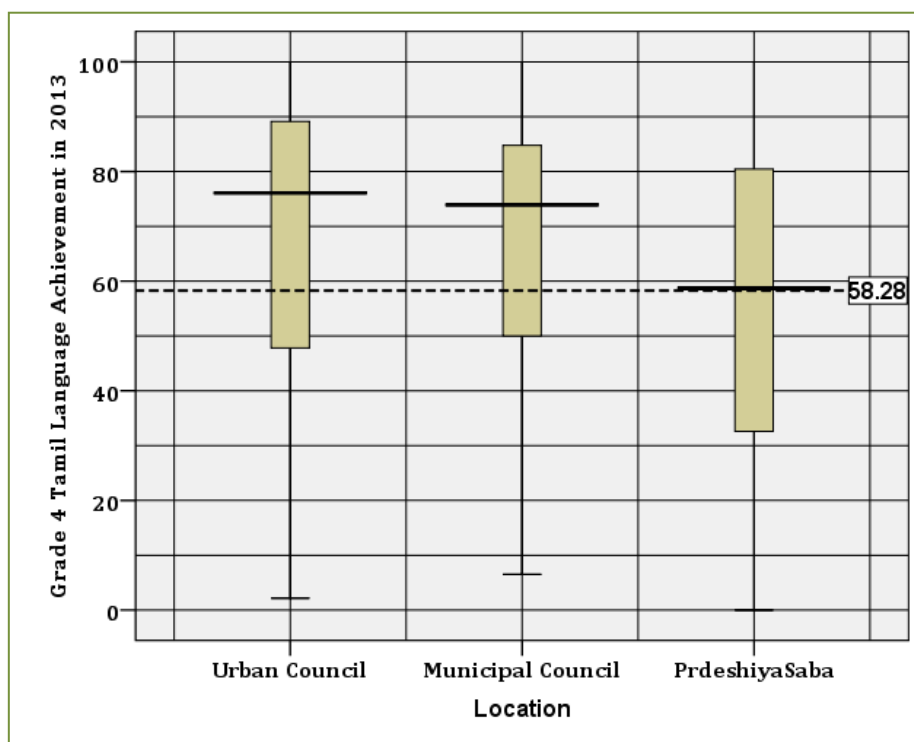
Fig. 3.27: Box plot for location – Tamil language

As the boxplot displays, the all island mean and the median of the pradeshiyasaba area schools are quite closer. On the other hand, in both municipal council as well as urban council area schools, the median values are higher than the all island mean.

Further, the spread of the two boxplots of the urban council and pradeshiyasaba schools indicate the greater diversity in performance already discussed.

Table 3.20 presents the summary statistics of students' performance according to urban/rural division.

Table 3.20: Tamil language achievement according to urban/rural demarcation

Location	Mean	Standard Deviation	Standard Error of Mean	Skewness	Percentile (p25)	Median (p50)	Percentile (p75)
Urban	67.43	24.163	0.186	-0.699	50.00	73.91	86.96
Rural	55.87	27.165	0.107	-0.209	32.61	58.70	80.43
All Island	**58.28**	**26.979**	**0.095**	**-0.311**	**34.78**	**63.04**	**82.61**

According to Table 3.20 there is nearly 12 point difference in the performance of students in the Tamil language according to whether the schools are in rural or urban area. The SD value also highlights that the rural students' mark deviation from the mean is greater than the urban students. Hence, student achievement is more heterogeneous in the rural schools.

The difference in the mean performance is further illustrated in Fig. 3.28
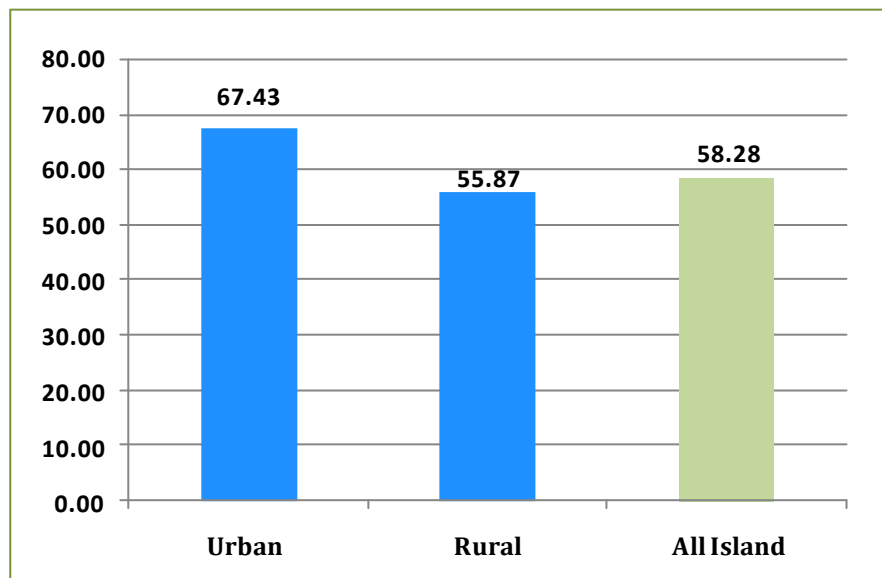
Fig. 3.28: Bar chart representing mean values according to location (Urban/Rural) – Tamil language

Summary

- Achievement in urban council area schools is slightly higher than the municipal council area schools, when considering the mean values.
  The student achievement is more homogeneous in the municipal council area schools as their SD is lower than the schools in the other two localities.

- There is disparity in achievement between urban and rural schools and the achievement is more heterogeneous in rural area schools.

3.7   Analysis of achievement by skill levels

3.7.1 Analysis of achievement by skill levels – Sinhala language

In constructing the achievement tests, the test items were designed in relation to the sub skills vocabulary, comprehension, syntax and writing.

Students' performance according to the sub skills is given in Fig. 3.29
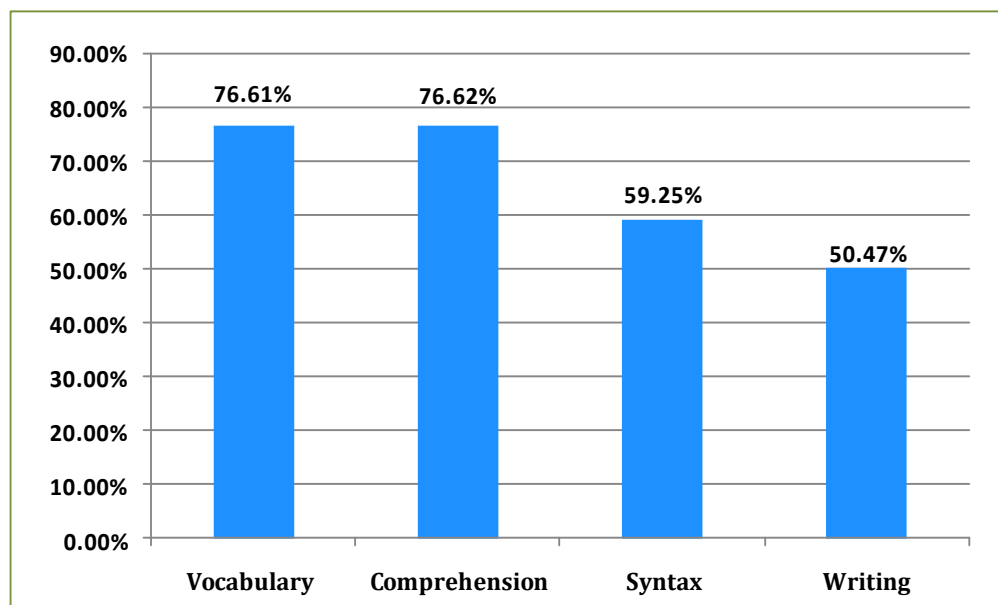
Fig. 3.29: Achievement in sub skills in Sinhala language

As Fig. 3.29 indicates, the weakest sub skill is writing.

The achievement in the writing task is further analyzed in Fig. 3.30. This analysis indicates the percentage of completely grammatically correct sentences, partially correct and incorrect sentences and the percentage not attempted.
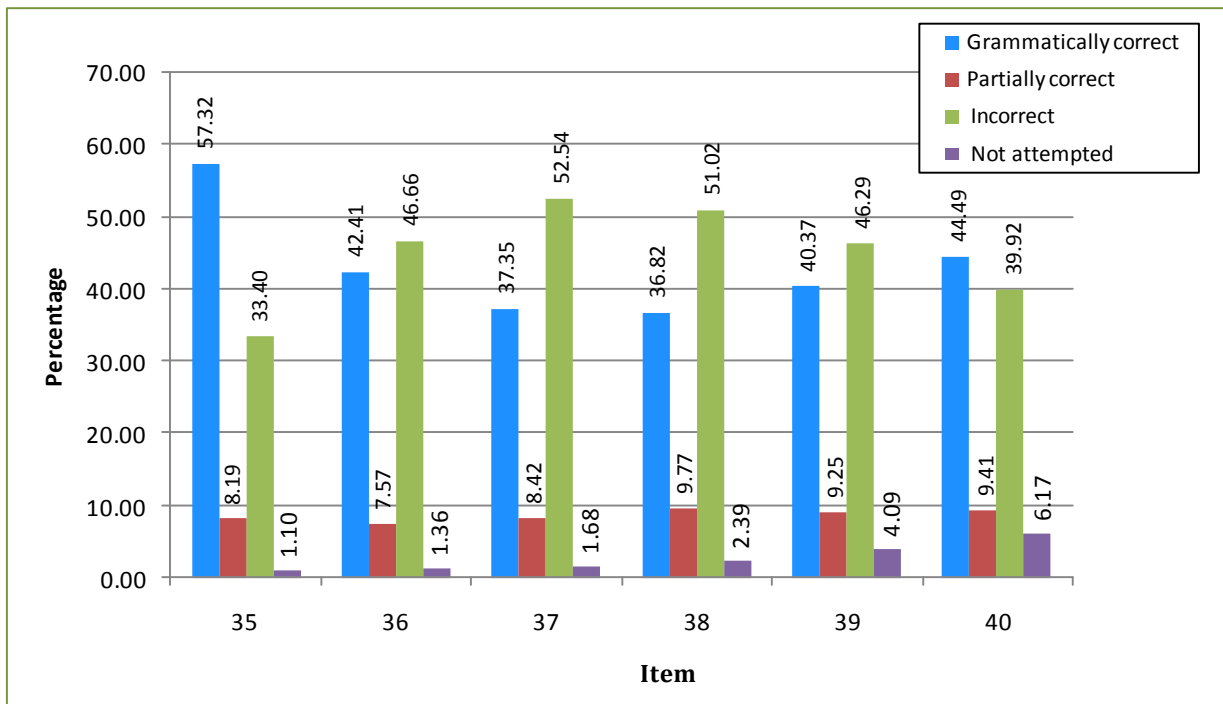
Fig. 3.30: Achievement in sub skills in Sinhala language – Writing

As the Fig. 3.30 indicates the percentage of incorrect sentences is rather high. On the other hand, there is more than 7% of students who have given partially correct answers which means that spellings and punctuations of these sentences are incorrect. Further, some students have not even attempted to write even the first sentence. Therefore, it appears that students' syntactical (grammar) knowledge and its application appear to influence the performance in writing.

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.

Table 3.21 indicates student performance in relation to the ELCs.

Table 3.21: Student performance in relation to the ELCs – Sinhala language

ELC no	Description	Q. No	% of correct responses
03	Filling a form	12	89.7%
		13	89.1%
		14	33.5%
06	Punctuation	15	89.5%
		16	53.5%
08	Spellings	17	29.3%
		18	45.9%
04	Subject verb agreement	19	88.4%
		20	67.2%
05	Sequencing	21	53.8%
		22	67.2%
		23	74.4%
		24	80.8%
07	Comprehension	25	65.5%
		26	80.9%
		27	74.0%

As Table 3.21 indicates there are only six ELCs pertaining to reading and writing. These relate mostly to reading. As the table displays students knowledge of spellings is weak. Further, for question number 14 students could not directly find the information, but had to infer the meaning.

The facility values given in Fig. 3.31 also confirms that students have found these items difficult.

Even though students are expected to write simple sentences, there is no ELC corresponding to writing paragraphs.
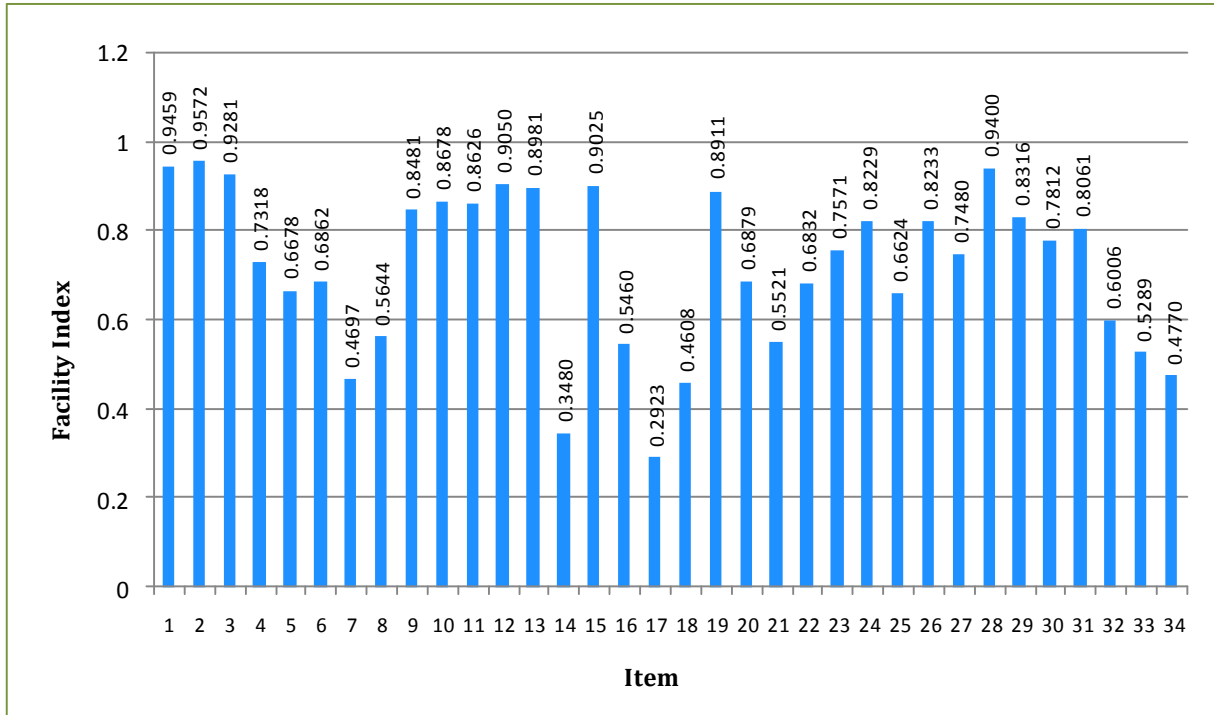
Fig. 3.31: Facility index value for Sinhala language

According to Fig. 3.31 the facility values range from 0.2923 to 0.9572.

Disparity in achievement seen through item analysis

The Item Person Map (IRT) given on pg. 64 displays the range of difficulty of the test items as well as the range in student ability. According to the map there are approximately 1450 students whose abilities are higher than the most difficult item. On the other hand, there are 830 students whose abilities are lower than the easiest item. Therefore, this analysis confirms the disparity in achievement which has been already discussed.

```
?=====================================================================
Sinhala Final Paper  - 2013                        Mon May 19 15:26 2014
MAP OF WLE ESTIMATES AND RESPONSE MODEL PARAMETER ESTIMATES
=====================================================================
                                            Terms in the Model (excl Step terms)

                                                    +item
  ------------------------------------------------------------------------------
                                            X|
                                             |
  6                                          |
                                             |
                                             |
  5                                        XX|
                                             |
                                             |
                                             |
  4                                    XXXXX|
                                             |
                                    XXXXXXXXXXX|
                                             |
  3                            XXXXXXXXXXXXXXXX|
                               XXXXXXXXXXXXXXXX|
                         XXXXXXXXXXXXXXXXXXXXXX|
                   XXXXXXXXXXXXXXXXXXXXXXXXXXXX|17
  2               XXXXXXXXXXXXXXXXXXXXXXXXXXX|14 37 38
                  XXXXXXXXXXXXXXXXXXXXXXXXXX|39
                  XXXXXXXXXXXXXXXXXXXXXXX|36
                  XXXXXXXXXXXXXXXXXXXXXX|7 18 40
                  XXXXXXXXXXXXXXXXXXX|34
            XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX|33
  1               XXXXXXXXXXXXXXXXXX|8 16 21
                  XXXXXXXXXXXXXXXX|32 35
                  XXXXXXXXXXXXXXX|
                  XXXXXXXXXXXXX|
            XXXXXXXXXXXXXXXXXXXXXX|5 6 20 22 25
  0               XXXXXXXXXXX|
                  XXXXXXXXXXX|4
                  XXXXXXXXXX|23 27
            XXXXXXXXXXXXXXXX|30
                  XXXXXXXXX|31
                  XXXXXX|24 26 29
 -1               XXXXXX|9
                   XXXX|10 11
                   XXXX|
                    XXX|19
                    XXX|12 13 15
                     XX|
 -2                  XX|3
                      X|28
                       |1
                      X|
                      X|2
 -3                   X|
                       |
                       |
 -4
  =====================================================================
Each 'x' represents  23.4 cases
  =====================================================================

  =====================================================================
```

Students with more ability

6

Students

Most difficult item

items

Students with low ability

Most difficult item

17

Less difficult item

Easiest item

2

3.7.2 Analysis of achievement by skill levels – Tamil language

The test items In the Tamil language paper too, were designed in relation to the sub skills of language as given in Table 2.5 in chapter 2. The performance of students according to the different sub skills is presented in Fig. 3.32.
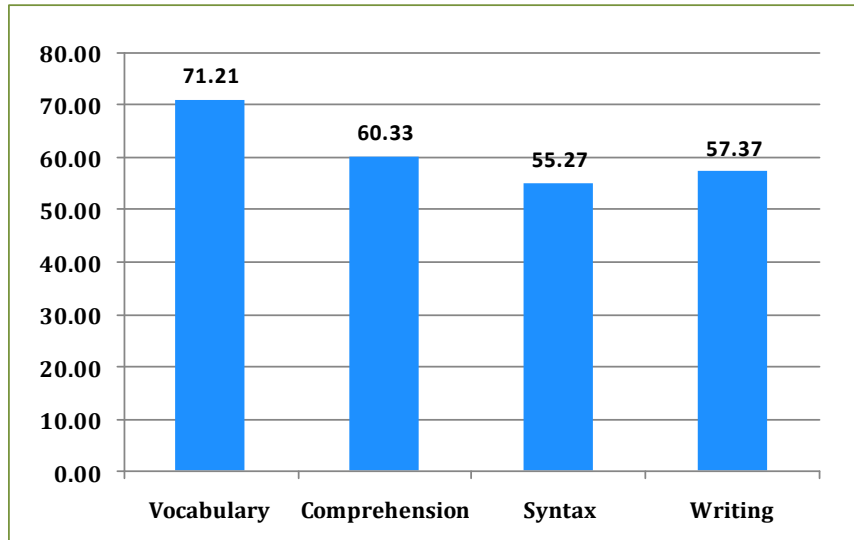

Fig. 3.32: Achievement in sub skills in Tamil language

As Fig. 3.32 indicates, the weakest sub skill is syntax.

The achievement in the writing task is further analyzed in Fig. 3.33. This analysis indicates the percentage of completely grammatically correct sentences, partially correct and incorrect sentences and the percentage not attempted.
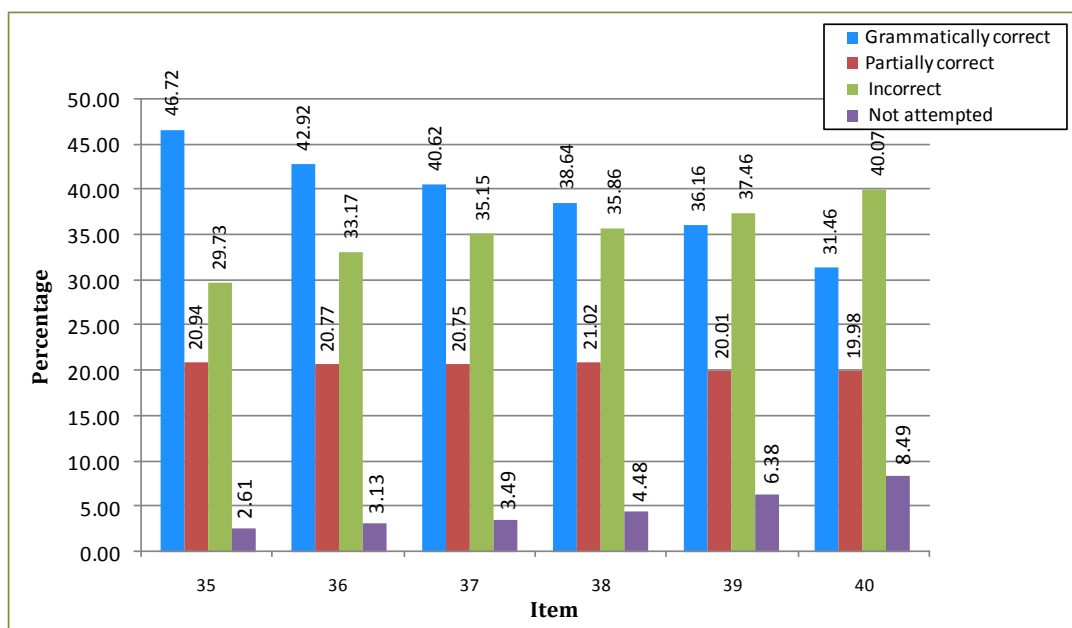

Fig. 3.33: Achievement in sub skills in Tamil language – Writing

As Fig. 3.33 indicates, there is more than 20% of students who have written partially correct sentences. This could be due to the low proficiency in spellings and punctuation. On the other hand, the number of incorrect sentences is even higher. Further, there are 2.61% of students who has not even attempted to write the first sentence.

Student achievement in relation to Essential Learning Competencies (ELCs)

Table 3.22 indicates student performance in relation to the ELCs.

Table 3.22: Student performance in relation to the ELCs – Tamil language

ELC no	Description	Q. No	% of correct responses
03	Filling a form	12	62.1%
		13	64.2%
		14	52.0%
06	Punctuation	15	54.5%
		16	64.9%
08	Spellings	17	60.1%
		18	36.1%
04	Subject verb agreement	19	79.6%
		20	24.4%
05	Sequencing	21	55.1%
		22	37.9%
		23	53.2%
		24	48.1%
07	Comprehension	25	65.1%
		26	62.8%
		27	63.0%

According to Table 3.22, students' achievement is lowest in question numbers 18 and 20. These questions were related to spellings and syntax. This is also evident in the Figure 3.34 where the facility values are lowest for these two questions.
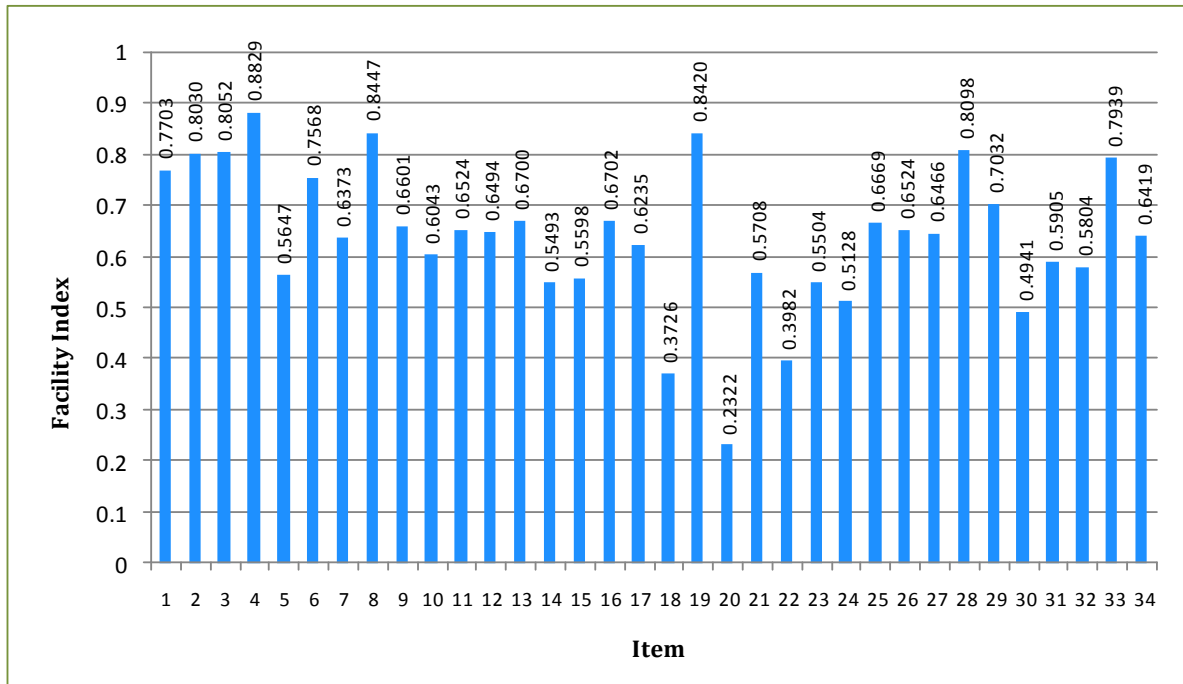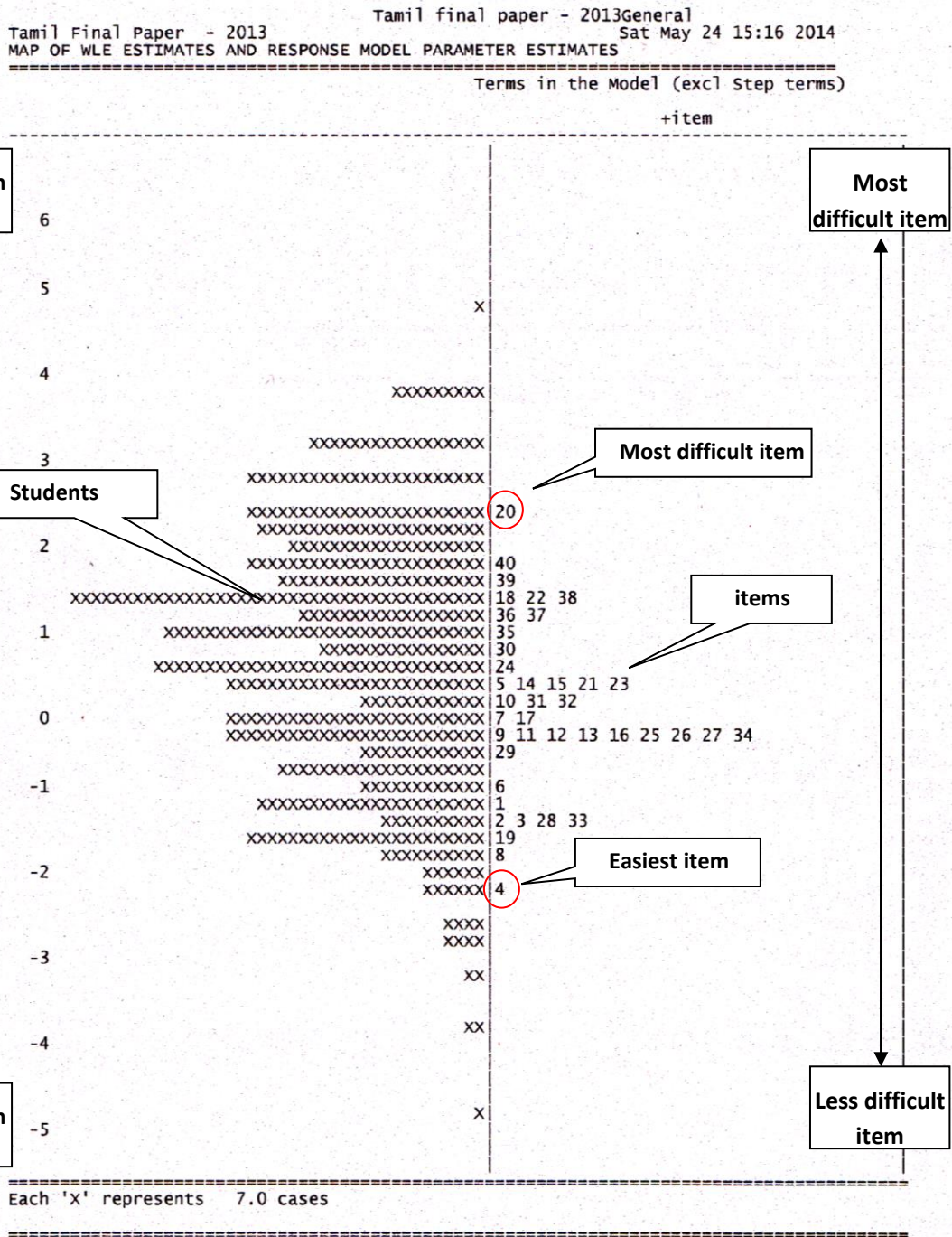
Fig. 3.34: Facility index value for Tamil language

Disparity in achievement seen through item analysis

The Item Person Map (IRT) given on pg. 68 displays the range of difficulty of the test items as well as the range in student ability. According to the map there are approximately 357 students whose abilities are higher than the most difficult item. On the other hand, there are 9 students whose abilities are lower than the easiest item. Therefore, this analysis confirms the disparity in achievement which has been already discussed.

```
Tamil Final Paper  - 2013        Tamil final paper - 2013General
                                           Sat May 24 15:16 2014
MAP OF WLE ESTIMATES AND RESPONSE MODEL PARAMETER ESTIMATES
============================================================================
                                       Terms in the Model (excl Step terms)
                                                     +item
----------------------------------------------------------------------------
```

Students with more ability

Most difficult item

Most difficult item

Students

items

Easiest item

Students with low ability

Less difficult item

```
Each 'X' represents   7.0 cases
```

3.8 Conclusion

This chapter discussed student achievement in the first language – Sinhala and Tamil. The analysis was in relation to national and provincial levels as well as according to school types, gender and location.