CHAPTER 5

Factors Affecting Performance In Selected Subjects

5.1 Introduction

This chapter presents detailed analysis of the academic performance of upper secondary students in three subjects at the SPM examinations. The achievement of students in each of the three subjects, namely, Bahasa Malaysia, English, and Mathematics is analyzed in terms of selected explanatory variables grouped into demographic, home environment, educational background as mentioned in Table 3.3.

The distribution of mean grades for the three subjects for various categories is presented for comparison purposes. The smaller the value of the mean, the better the performance. Chi-Square test is carried out to determine if there is any significant relationship between explanatory variables and the grades of the three subjects. The results of these analyses are summarized in Tables 5.1 until 5.13 in the following sections.

5.2 Differentials in Subject Performance By Student's Gender, Ethnicity And Childhood Residence

(i) Gender

Table 5.1: Percentage Distribution of Subject Grades by Gender

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	Mean
Bahasa Malaysia	Female	7.5	13.5	40.0	12.3	9.4	16.7	0.6	0.1	0	100	3.55
	Male	3.2	11.7	33.7	14.7	12.7	22.9	0.9	0.1	0.1	100	3.95
*Chi-Square test (p- value) = 0.000												
English	Female	13.0	5.8	12.9	3.9	4.6	11.0	15.8	13.6	19.4	100	5.62
	Male	12.9	8.7	11.6	3.7	4.6	10.0	13.2	13.2	22.1	100	5.6
Chi-Square test (p- value) = 0.061												
Mathematics	Female	6.3	12.3	14.3	5.2	6.6	8.9	7.3	8.1	31.0	100	5.76
	Male	11.0	17.4	15.4	5.3	3.6	10.8	6.9	6.0	23.6	100	5.04
Chi-Square test (p- value) = 0.000												

*Percentages of P7, P8 and F9 have been combined with C6 for each category before the Chi-Square test was carried out as the cells had values below 5.

From Table 5.1, it can be deduced that the performance of female students in Bahasa Malaysia is almost the same as the male students except for the sharp difference in the percentage of students achieving A1, A2 and C3. The overall performance of the female students is slightly better than the male students as the mean grade of female students is slightly lower than the male students. It was stated in the literature review (Hanna et. al., 1990), that female students generally do well in languages rather than science and mathematics related subjects in most countries. The gender difference in the mean grades of Bahasa Malaysia is reflected by the Chi-Square test, which indicates that there is a significant association (p-value < 0.05) between gender and grades.

There is not much difference in the distribution of English grades between male and female students and this is indicated by the insignificant (p-value >0.05) Chi- Square test. In other words, both the boys and girls will either do well very well or poorly in English language. However, the percentage of failure is higher among the male students (22.1) as compared to the female students (19.4). The mean score is almost the same for both boys and the girls.

The performance of the male students is much better compared to female students for Mathematics. This is depicted by the sharp difference in the percentage of students who obtained a distinction (A1 and A2), where 28.4 percent of the male students scored a distinction as compared to only 18.6 of the female students in the same category. Almost one third of the girls failed (a grade of F9) Mathematics, while the failure rate among the boys is much lower (See Table5.1).

In general, the command of English of both male and female students is rather poor. The male students seem to have mathematical ability rather than being proficient in languages. However, the female students seem to do well in language rather than Mathematics, which requires analytical ability.

(ii) Childhood Residence

The Chi-Square test shows insignificant association between Bahasa Malaysia grades and childhood residence (rural, small and large towns) and this is reflected by the grade distribution displayed in Table 5.2. Students would or would not perform well in Bahasa Malaysia regardless their childhood residence.

Table 5.2: Percentage Distribution Of Subject Grades By Childhood Residence

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	Mean
Bahasa Malaysia	Rural	5.2	13.9	38.5	13.5	11.2	17.2	0.5	0.1	0.1	100	3.66
	Small Town	5.2	10.5	36.8	13.3	11.1	22.3	0.8	0	0	100	3.85
	Large Town	7.0	12.0	35.6	13.1	9.6	21.3	1.2	0.1	0	100	3.73
*Chi-Square test (p- value) = 0.117												
English	Rural	1.3	2.2	6.0	2.7	3.0	9.8	20.5	19.7	34.8	100	7.23
	Small Town	12.3	9.0	18.8	5.1	8.2	16.6	11.8	9.4	8.7	100	4.84
	Large Town	35.8	14.4	19.1	5.1	4.7	6.6	5.8	5.0	3.4	100	3.17
Chi-Square test (p- value) = 0.000												
Mathematics	Rural	3.5	6.6	10.5	6.1	4.9	11.3	9.2	8.6	39.5	100	6.52
	Small Town	10.4	19.9	18.4	4.1	7.1	8.8	7.1	6.8	17.2	100	4.7
	Large Town	15.7	24.8	19.7	4.7	4.8	7.3	3.4	5.0	14.3	100	4.07
Chi-Square test (p- value) = 0.000												

*Percentages of P7, P8 and F9 have been combined with C6 for each category before the Chi-Square test was carried out as the cells had values below 5.

The mean score indicates that there is not much difference in the performance of students in Bahasa Malaysia in terms of childhood residence but pronounced differences are observed for both English and Mathematics. Rural students' performance in English very much lower compared to students from small and large towns.

Much has been said about the high failure rate of students in Mathematics and English lately, and it is quite obvious that high percentage of students who grew up in rural areas had failed English and Mathematics. Looking at the percentage of students who obtained distinctions in English and Mathematics, it is evident from Table 5.2 that majority come from large towns and followed by small towns respectively. Most large

towns in Malaysia have schools equipped with good facilities, like libraries, computer and Internet facilities which enhances the teaching and learning process. However, accessibility to modern technology may be a major problem in rural areas. As explained earlier in Chapter 4, childhood residence of students is very much related to the educational level and occupational sector of fathers. Students from rural areas have their fathers' working in agricultural sector, with not much education and hence, prove to be a great disadvantage to them.

(iii) Ethnicity

Differentials in subject grades in terms of ethnicity are displayed in Figures 5.1, 5.2, and 5.3. Bumiputera students performed better than the other two ethnic groups in Bahasa Malaysia where majority of them obtained a grade of C3 or better. The mean grade of Bumiputera students was 3.45 and this can be classified as a strong credit (C3). Chinese students scored a mean grade of 4.14, while the Indians had a mean grade of 4.20. The Chi- Square test indicates a significant (p-value of less than 0.05) relationship between Bahasa Malaysia grades and ethnicity.

Figure 5.1: Performance in Bahasa Malaysia By Ethnicity

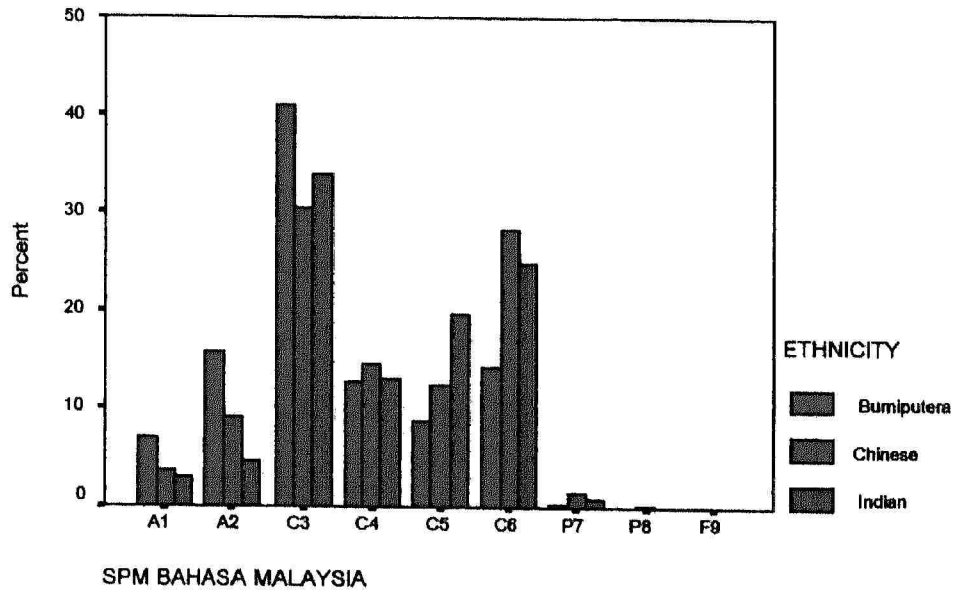


Figure 5.2: Performance in English By Ethnicity

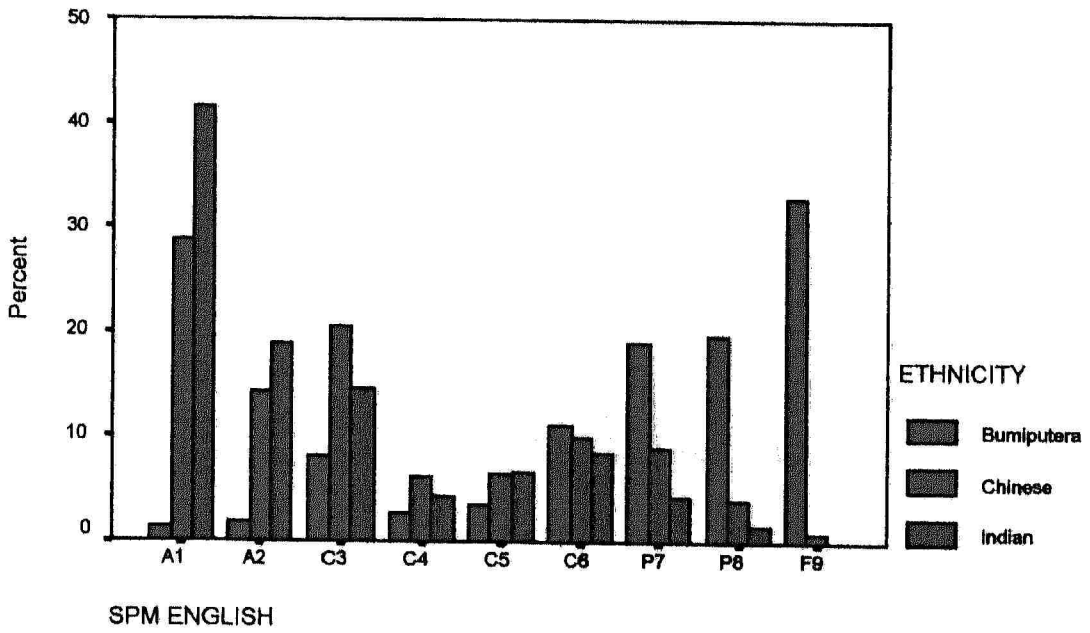
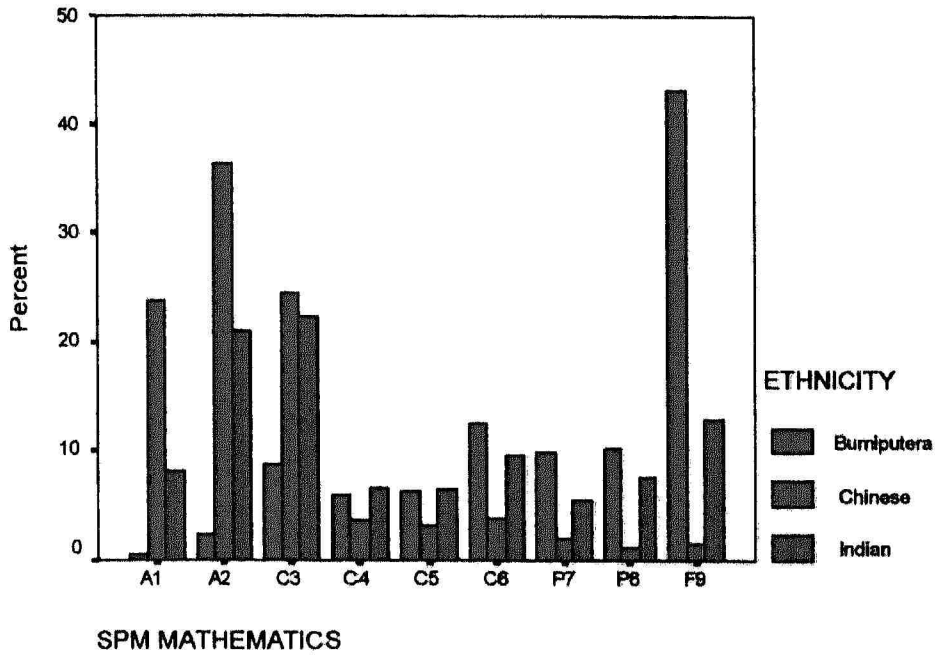


Figure 5.2 depicts the performance of students in English for the three ethnic groups. Generally the Indians are the top performers in English while, the Bumiputera students have much difficulty in mastering the language. The percentage of distinctions in English is highest among Indian students. The mean grade of Indian students is 2.68, which is a distinction, compared to a mean grade of 7.11 for Bumiputera students. A mean grade above 7 is an indication of poor performance and Figure 5.2 highlights that majority of them who have obtained a grade of P7, P8 and F9 was Bumiputera students. The mean grade for Chinese students was 3.38, equivalent to a C4, which can be considered as a fairly good performance.

Figure 5.3: Performance in Mathematics By Ethnicity



Mathematics performance in the SPM examination is evenly distributed as indicated by a small coefficient of skewness which is -0.073 (See Table 5.8). However, the distribution of Mathematics grades varies greatly in terms of ethnicity. Figure 5.3

depicts the high failure rate amongst Bumiputera and Indian students. The Chinese students have performed exceptionally well compared to the other two ethnic groups, as their mean grade of 2.6, which is equivalent to a C3. Indian students perform slightly better than the Bumiputra students, with the mean grade of 4.48, while a mean grade of 7.04 was observed for Bumiputera students.

5.3 Differentials in Subject Performance By Selected Home Environment Variables

(i) Family Size

Table 5.3: Percentage Distribution Of Subject Grades By Family Size

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	Mean
Bahasa Malaysia	Small	5.8	11.6	38.6	13.0	10.6	19.8	0.5	0	0	100	3.74
	Average	7.1	9.7	38.1	14.1	11.1	19.2	0.8	0	0	100	3.73
	Large	5.1	14.2	36.9	13.0	10.6	19.2	0.7	0.1	0.1	100	3.71
*Chi-Square test (p- value) = 0.495												
English	Small	41.7	12.7	7.4	4.4	5.9	5.4	5.9	4.9	11.8	100	3.54
	Average	24.8	12.1	16.6	4.0	4.2	8.3	10.3	8.3	11.3	100	4.27
	Large	4.6	4.1	11.2	3.8	4.7	12.1	17.6	16.6	25.4	100	4.27
Chi-Square test (p- value) = 0.000												
Mathematics	Small	16.6	27.6	13.6	2.5	6.0	17.0	3.0	3.5	18.6	100	4.19
	Average	13.2	20.7	17.7	5.4	5.5	8.5	5.0	6.0	18.1	100	4.53
	Large	5.2	10.1	13.6	5.6	5.2	10.3	8.5	8.2	33.8	100	6.01
Chi-Square test (p- value) = 0.000												

*Percentages of P7, P8 and F9 have been combined with C6 for each category before the Chi-Square test was carried out as the cells had values below 5.

Table 5.3 shows that family size does not have much effect on Bahasa Malaysia grades, as the mean score is almost the same for all students. In other words, students will do well or not do well regardless of the size of family they come from. The Chi-Square test indicates there is no significant association between family size and Bahasa Malaysia grades.

However, students from small families have performed better in English and Mathematics than students form large families (see Table 5.3). The difference in mean is obvious, especially for Mathematics. The percentage of students from small families who obtained A1 for Mathematics is triple the percentage of students from large families. More than 40 percent of student from large families had failed Mathematics compared to only 20 percent from small families.

(ii) Father's Educational Level

Figures 5.3, 5.4, and 5.5 highlights the importance of fathers' education level on subject performance of students in this study. As can be seen in Figure 5.4, the percentage of students, who obtained distinctions in Bahasa Malaysia, is higher among students whose fathers' have tertiary education. Almost equal percentage is observed for all other education levels with slightly lower percentage of students who obtained C6 (see Figure 5.4).

Figure 5.4: Father's Education Level And Performance In Bahasa Malaysia

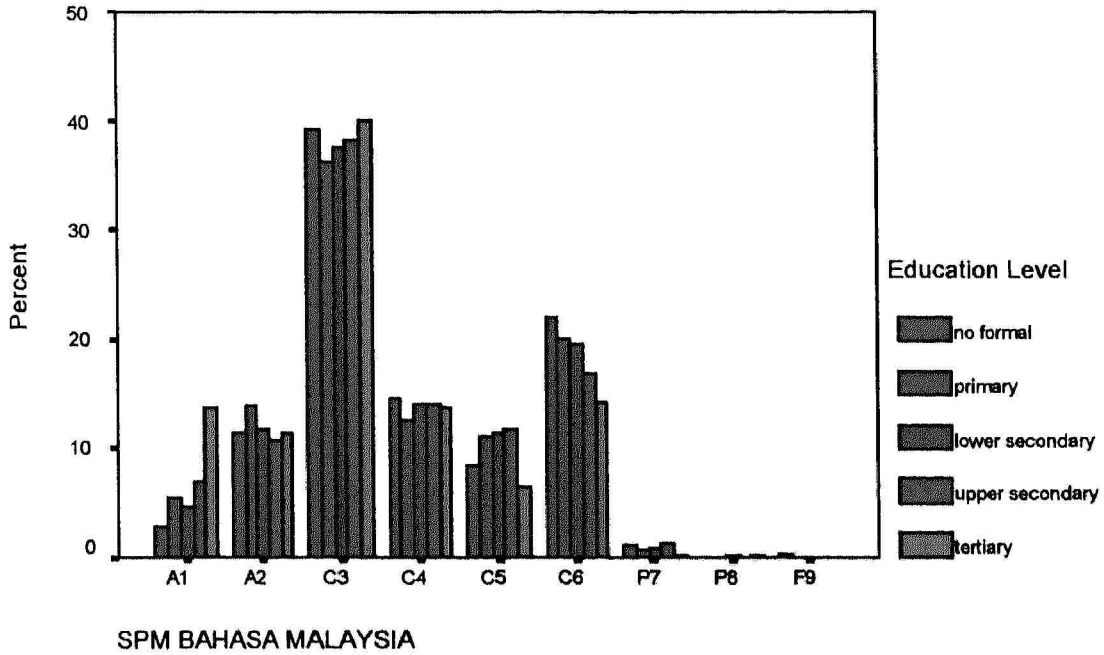


Figure 5.5 and 5.6 shows a pronounced difference in the performance of students in English and Mathematics. Students whose fathers are highly educated have performed exceptionally well in these two subjects. Figure 5.5 show that a good proportion of students whose fathers' have upper secondary and tertiary education obtained a grade of A1 for English. The failure rate is high amongst students whose fathers' have no formal education. The mean grades displayed in Table 5.4 clearly depict the effect of father's education level on English performance. The higher the father's education attainment, the lower the mean grade, which an indication of higher performance. Students' whose fathers' have higher than lower secondary education, must have had gone through English medium of instruction in their primary and secondary education and therefore would most likely be proficient in English language.

These parents would most probably communicate in English with their children and therefore, the performance of students coming from such a background would generally tend to be higher.

Figure 5.5: Father's Education Level And Performance In English

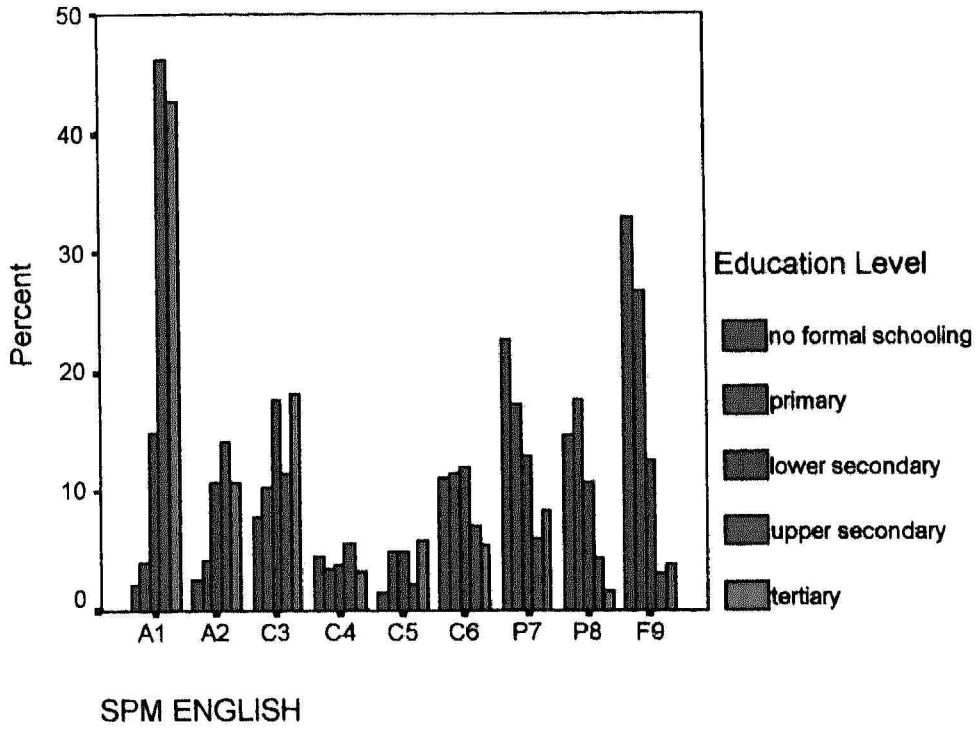
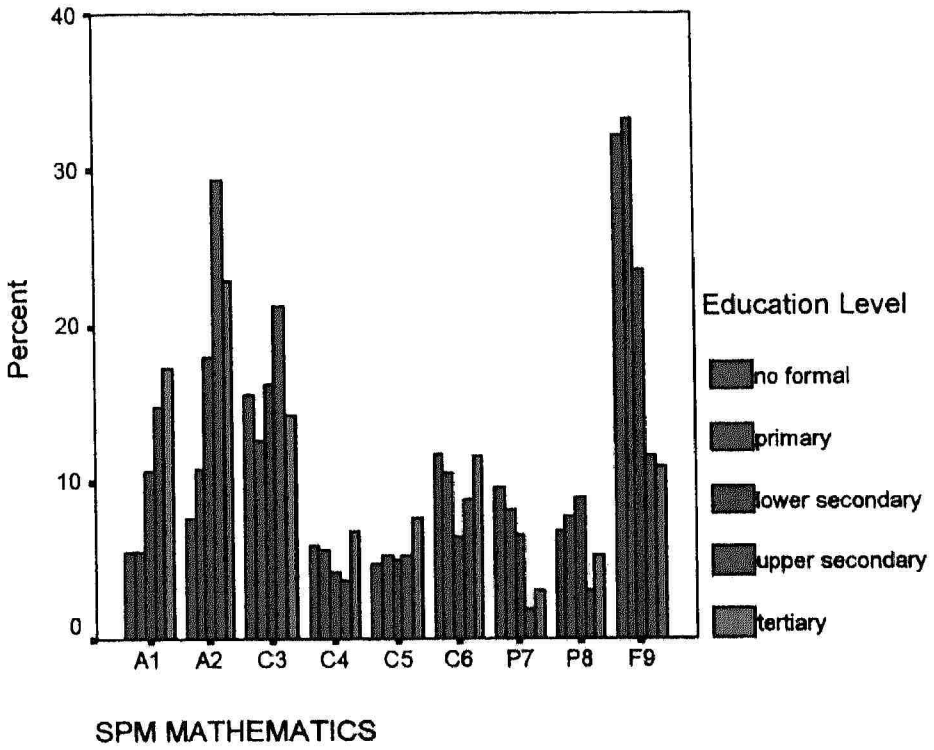


Table 5.4: Mean Grades By Father's Education Level

	Mean		
	Bahasa Malaysia	English	Mathematics
No Formal Schooling	3.88	6.97	5.98
Primary	3.73	6.53	5.98
Lower secondary	3.78	4.9	5.08
Upper Secondary	3.69	2.8	3.74
Tertiary	3.30	2.9	4.04

Figure 5.6: Father's Education Level And Performance In Mathematics



Poor performance in Mathematics is obvious from Figure 5.6 amongst students whose father's have no formal education. Table 5.6 which summarizes the socio-economic status of students' fathers' shows that a high proportion of fathers' who had no formal education worked in the agricultural sectors and earned less than RM 1000 a month. Figure 5.5 shows more than 30 per cent of these students failed in SPM Mathematics and majority come from families where their fathers have lower secondary education or below. In Table 5.4 lower mean grades (higher performance) are observed amongst students whose fathers' have upper secondary education.

(iii) Father's Income Level

Performance of students in Bahasa Malaysia is not very much influenced by the fathers' income level as the Chi-Square test (p-value>0.01) indicates that there is no significant association between Bahasa Malaysia grades and income level. The mean grades do not differ much for the various income level (See Table 5.5). Generally all students have done well in Bahasa Malaysia regardless of their fathers' income level as the mean grades is below 4.

However, performance of students in English shows a significant relationship with fathers' income level. Table 5.5 shows that students whose fathers' earn high salary have performed better. The percentage of distinctions among students whose fathers' earn between 1501-2000 and above 2000 is approximately 47 percent and 65 percent respectively. In contrast only 5.2 percent of students whose fathers' earn less than RM1000 a month obtained distinctions for English. Parents, who are highly educated and have a high salary, are normally professionals and such tend to communicate in English at work and at home. Obviously students from these families would have an added advantage of having a strong command of the language

Table 5.5: Percentage Distribution Of Subject Grades By Father's Income Level

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	Mean
Bahasa Malaysia	<1000	5.8	13.5	37.5	13.0	11.3	18.3	0.5	0.1	0.1	100	3.68
	1001-1500	4.0	11.2	36.1	12.9	10.9	23.4	1.4	0.1	0	100	3.92
	1501-2000	6.7	11.8	36.9	13.7	10.2	19.7	1.0	0	0	100	3.73
	>2001	7.3	11.2	40.8	17.3	8.4	15.1	0	0	0	100	3.56
*Chi-Square test (p- value) = 0.245												
English	<1000	2.3	2.9	7.9	3.1	3.2	11.1	18.2	18.6	32.8	100	6.97
	1001-1501	14.2	11.4	19.0	3.6	7.5	11.6	14.1	10.7	7.8	100	4.7
	1501-2000	35.7	11.9	15.8	8.4	3.9	7.4	9.3	4.2	3.5	100	3.36
	>2001	50.3	15.1	12.3	2.8	5.6	5.0	3.9	1.7	3.4	100	2.60
Chi-Square test (p- value) = 0.000												
Mathematics	<1000	2.9	7.0	11.2	5.5	6.0	12.2	9.3	8.6	37.2	100	6.44
	1001-1500	12.9	19.3	18.6	4.7	4.4	7.2	6.7	6.1	20.3	100	4.69
	1501-2000	16.5	24.2	20.0	4.5	6.1	8.1	3.2	5.8	11.6	100	3.96
	>2001	17.1	37.7	16.6	6.3	4.6	4.6	0.6	5.1	7.4	100	3.29
Chi-Square test (p- value) = 0.000												

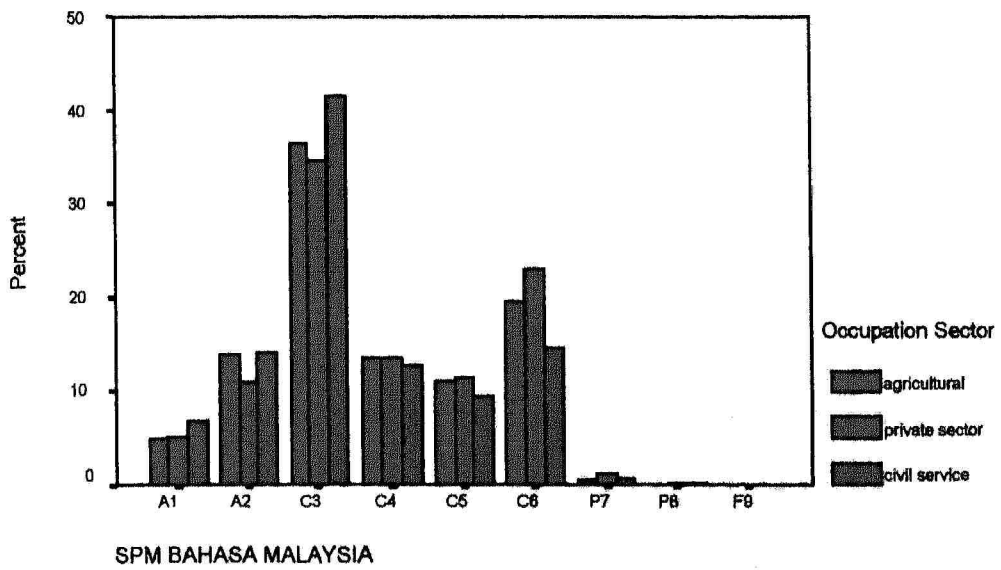
*Percentages of P7, P8 and F9 have been combined with C6 for each category before the Chi-Square test was carried out as the cells had values below 5.

Further, the parents of these students would be financially able to provide additional tuition and also a more conducive learning environment. Some of these students have the opportunity of having personal computers, which helps make the learning of English language more interesting.

Performance in Mathematics somewhat follows the same pattern as English performance, as students whose parents earn high salary have done better than students from families where the income level of fathers' is low. Majority of the students from lower income group have failed Mathematics.

(iii) Father's Income Level

Figure 5.7: Father's Occupation Sector And Performance In Bahasa Malaysia



As can be seen in Figure 5.7, the difference in the grades distribution of students whose fathers' work in different sectors is obvious for grade C3 and C6. Large proportion of students whose fathers' work as civil servants obtained a grade of C3 for Bahasa Malaysia and the mean grade of these students was 3.51 (see Table 5.7). However, the percentage of students, who achieved a grade of C6, is higher among the students whose fathers' are employed in the private sector. As seen earlier in chapter 4, large proportion of Chinese students fathers' were employed in the private sector. In addition, about 46 percent of the fathers' of science stream students are employed in the private sectors. Chi-Square test shows a significant relationship (p-value<0.05) between father's occupation sector and Bahasa Malaysia grades.

Table 5.6 summarizes that socio-economic status of fathers' of the students in this study. It is very obvious that fathers who are employed in the agricultural sector are not highly educated nor earn a month salary of more than RM1000. Fathers' who work in the private sector were slightly more educated, earned a monthly salary of about RM 1000-1500 on average. Fathers' who earned more than RM1501 were mostly in the civil service and belong to a more educated group. 208 of the 669 fathers in the civil service had only primary education. 133 of fathers' in this group earned less than RM 1000 a month. These fathers' may belong to the older generation, where they may have started working during the 1950's with only primary level. The education system and demands of the country was totally different then, from what it is now.

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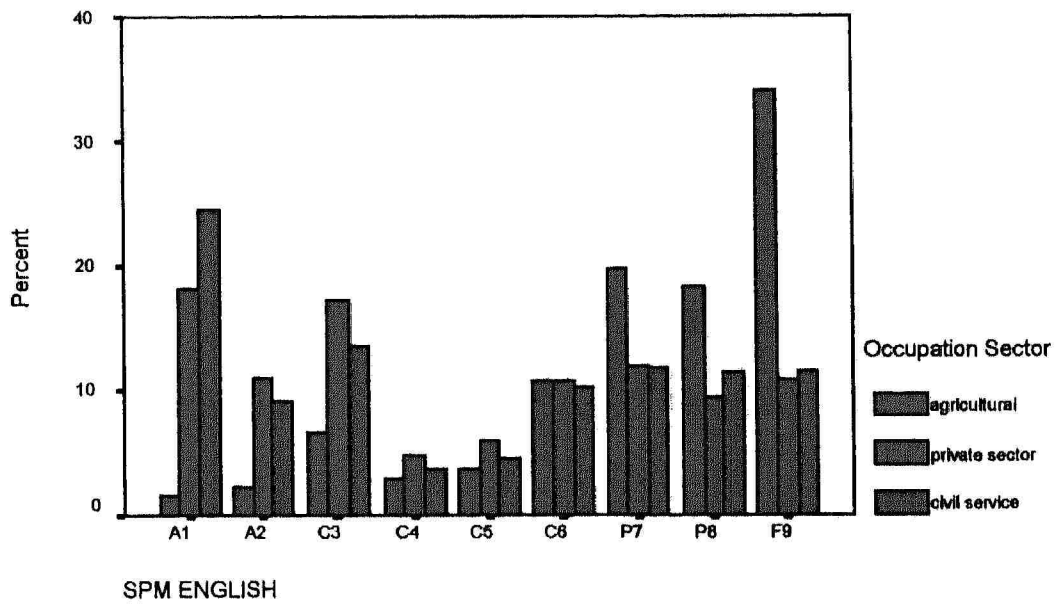
Table 5.6: Distribution of Father's Education and Income level by Occupational Sector

		< 1000	1001-1500	1501-2000	2000and >	Total
Agricultural	No Formal	124	15	0	1	140
	Primary	623	86	12	1	722
	Lower Secondary	80	28	4	4	116
	Upper secondary	10	11	6	2	29
	Tertiary	2	3	3	2	10
		839	143	25	10	1017
Private Sector	No Formal	34	18	3	0	55
	Primary	219	189	41	16	465
	Lower Secondary	60	118	30	28	236
	Upper secondary	8	40	19	32	99
	Tertiary	4	10	7	22	43
		325	375	100	98	898
Civil Service	No Formal	7	1	0	0	8
	Primary	133	63	9	3	208
	Lower Secondary	56	73	55	11	195
	Upper secondary	16	43	83	12	154
	Tertiary	2	14	47	41	104
		214	194	194	67	669

Table 5.7: Mean Grades By Father's Occupation Sector

	Mean		
	Bahasa Malaysia	English	Mathematics
Agricultural	3.73	7.12	6.25
Private Sector	3.89	4.62	4.61
Civil Service	3.51	4.58	5.25

Figure 5.8: Father's Occupation Sector And Performance In English



There is a strong relationship between fathers occupational sector and performance in English. Students' whose father's occupation is related to the non-agricultural sector have generally performed better in English. Figure 5.9 shows that, among those who have failed English, more than 30 percent of student's fathers' work in the agricultural sector. The mean grades of students for English vary greatly across the occupation sectors (see Table 5.7).

Figure 5.9: Father's Occupational Sector And Performance In Mathematics

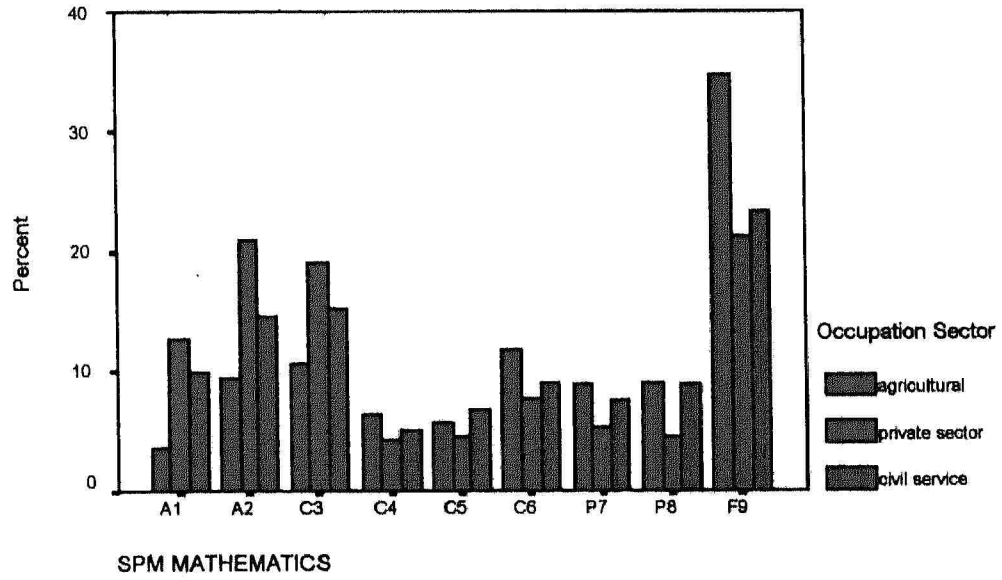


Figure 5.8 shows the performance of students whose fathers' work in the agricultural sector is lower than students from other sectors. Large proportion of students whose fathers' work in the private sectors scored a grade A1, A2 and C3. Although there is a significant difference in mean grades of students from the three sectors, the gap is not as wide as English grades.

5.4 Differentials in Subject Performance By Medium Of Instruction

As indicated earlier in Chapter 4, majority (78 percent) of students in this study went through the Malay medium of instruction at primary school. Only one percent of students were educated in Tamil schools and less than one percent were educated in English medium schools. Although the percentage is small, it was interesting to observe the grade differentials of these students for the three subjects and such was included in this section.

Figure 5.10: Medium Of Instruction And Performance In Bahasa Malaysia

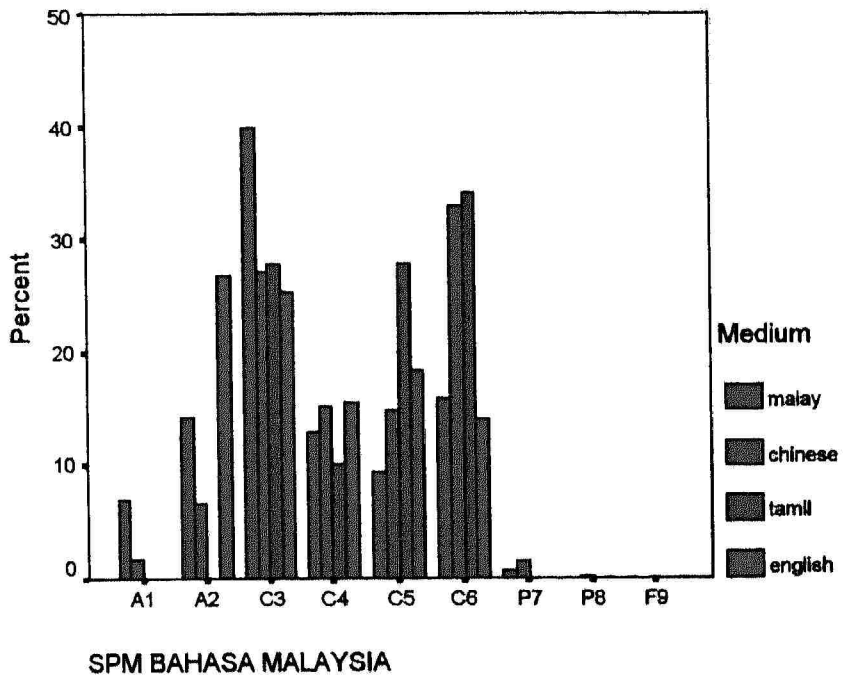
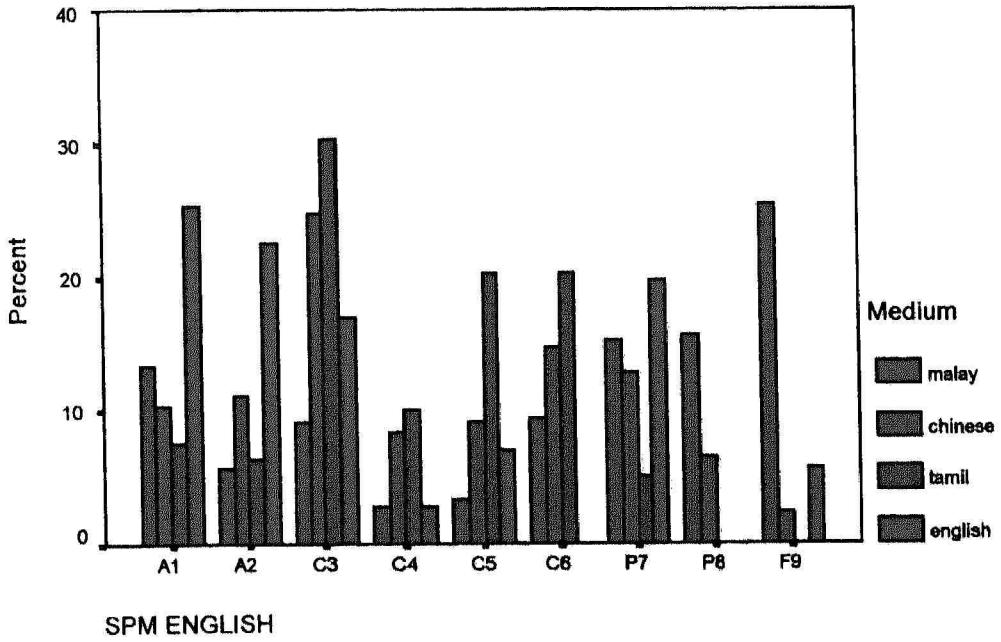


Figure 5.10 show that the performance of Malay medium students in Bahasa Malaysia is much better than the others. None of the Tamil educated or the English medium students had obtained distinctions (A1 and A2). Among the students who had a grade of C6, the majority were from Chinese and Tamil schools.

Figure 5.11: Medium Of Instruction And Performance In English



As expected, students from English medium schools turned to be the top performers for English language (see Figure 5.11). The performance of the Chinese and the Tamil school students are comparable but high percentage of students from Malay medium schools have failed in English.

Figure 5.12: Medium Of Instruction And Performance In Mathematics

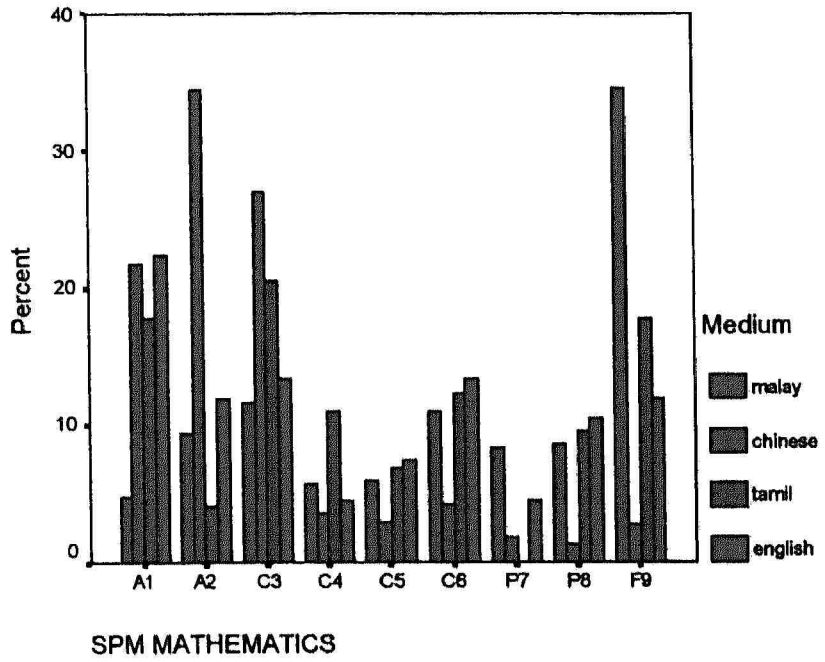


Figure 5.12 clearly portrays the fact that the performance of Chinese medium students is far better than others. Large proportion of students scored A1, A2 and C3. Again, high percentage of Malay medium school students had failed Mathematics. The performance of students from Tamil and English medium schools is not too encouraging either as indicated by a mean grade of 4.77 and 5.09 in Table 5.8.

Table 5.8: Mean Grades By Medium Of Instruction

	Mean Subject Grades		
	Bahasa Malaysia	English	Mathematics
Malay	3.55	5.97	6.16
Chinese	4.40	4.37	2.75
Tamil	4.68	4.1	4.77
English	3.54	4.46	5.09

Table 5.9: Differentials in Subject Performance By Stream Of Study

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	Mean
Bahasa Malaysia	Science	4.5	10.0	30.4	15.7	12.7	25	1.5	0	0	100	4.03
	Arts	6.1	13.7	39.5	12.5	10.1	17.5	0.5	0.1	0	100	3.62
*Chi-Square test (p- value) = 0.000												
English	Science	27.1	14.9	17.9	5.0	6.0	9.3	10.7	5.7	3.5	100	3.68
	Arts	8.5	4.5	10.6	3.5	4.1	11.0	16.0	15.9	25.9	100	6.22
Chi-Square test (p- value) = 0.000												
Mathematics	Science	26.4	33.6	25.4	4.8	3.6	3.6	1.3	0.1	1.2	100	2.5
	Arts	2.4	8.1	11.2	5.5	5.9	11.7	9.0	9.6	36.6	100	6.44
Chi-Square test (p- value) = 0.000												

*Percentages of P7, P8 and F9 have been combined with C6 for each category before the Chi-Square test was carried out as the cells had values below 5.

Generally, students from the Science stream obtained better results in English and Mathematics compared to the Arts students. The lower mean grades for English and Mathematics reflects better results for the science students. Almost 37 percent of Arts student have failed Mathematics. However, there is not much difference in the mean grades between the two streams for Bahasa Malaysia.

5.5 Differentials in Subject Performance By Prior Achievement In The Respective Subjects

As the respondents of this study are currently in sixth form, they would had gone through two national examinations, namely, Sijil Rendah Pelajaran (SRP) and Sijil Pelajaran Malaysia (SPM). The grades obtained at the SRP examinations for the three subjects serves as a measure of prior academic ability in the selected subjects.

It is hypothesized that there is a positive correlation (confirmed by the results in Table 5.1) between the grades of the individual subjects at the two examinations. Students who have performed well in SRP examinations will most likely do well in the SPM examinations.

The grades of each of the three subjects are compared for both the SRP and SPM examinations to see if students maintain the grades obtained at SRP for the SPM examination. The results of SRP examinations are graded in the similar manner as the SPM examinations (See Table 3.1)

Table 5.10 summarizes the distribution pattern of results for the three subjects. The mean of Bahasa Malaysia grades shows a decrease, implying the performance of students in SPM Bahasa Malaysia is better than SRP. However, similar comparison for the English and Mathematics grades indicates poorer performance of students in the SPM examinations compared to SRP. The coefficient of variation indicates a larger variation in SRP grades is for all three subjects at the SRP examinations compared to SPM examinations.

A positive skewness is observed for all the three subjects in the SRP examinations. This is an indication of better performance, as the grades of most students will be lower than the mean grade. It is interesting to note the extreme value for the mode grades achieved by majority of students in English language at the SRP and SPM examinations. At the SRP examinations, most students obtained a distinction, however in SPM examination most of them failed English language. One possible explanation for this vast difference in English grades could be explained by the examination format of SRP and SPM. In the SRP examination students' knowledge in English is tested by multiple-choice questions, however at the examination student's oral and written abilities are tested. Most students may not do well especially in essay writing during the examination as they lack good foundation in the language due to factors such as the medium of instruction. Sharp difference is observed between the best 20 percent and the worst 20 percent of students for English and Mathematics. The detailed performance of the students in this study for the three subjects at the two examinations is presented in Table 5.11, 5.12 and 5.13.

Table 5.10: Summary Of Descriptive Statistics Of Subject Grades

	Bahasa Malaysia		English		Mathematics	
	SRP	SPM	SRP	SPM	SRP	SPM
Mean	3.84	3.72	4.5	5.61	4.01	5.46
Median	3	3	4	6	3	6
Mode	3	3	1	9	1	9
Std.Dev	1.72	1.51	2.89	2.8	2.62	2.93
C.Variation	0.45	0.41	0.64	0.5	0.65	0.53
Skewness	0.592	0.272	0.127	-0.356	0.263	-0.073
Best 20%	2	3	1	3	1	2
Worst 20%	6	6	8	9	7	9

The positive correlation (0.384) between SRP and SPM Bahasa Malaysia grades indicates that students who obtained good results at the SRP examination will also do well in The SPM examinations. Table 5.9 shows that majority of students who obtained A1, A2 and C3 in the SRP examination, scored a grade of C3 in SPM Bahasa Malaysia. The mean grade was between 2.87 and 3.44 for these students.

Of the students who achieved a grade of C6, P7 and P8 in SRP Bahasa Malaysia, majority of them had a grade of C6 for SPM Bahasa Malaysia. There was only one student in this sample (not shown in the Table) who had a fail grade (F9) for SRP Bahasa Malaysia, and this one students scored a grade of C3in SPM examination.

Table 5.11: Percentage Distributions of SPM grades in Bahasa Malaysia by Performance in SRP

SPM Grades		A1	A2	C3	C4	C5	C6	P7& P8	F9	Total	n	Mean
S	A1	8.9	30.7	41.6	7.9	4.0	6.9	0	0	100	101	2.87
R	A2	11.6	21.5	42.1	10.5	4.6	9.6	0	0	100	456	3.04
P	C3	6.9	13.4	45.0	12.1	9.5	12.0	0.6	0	100	1070	3.44
G	C4	5.5	7.5	32.5	23.0	10.0	20.5	1.0	0	100	200	3.91
R	C5	2.1	8.1	34.9	14.4	19.0	20.8	0.7	0	100	284	4.06
A	C6	1.1	6.6	27.7	14.4	11.9	36.8	1.4	0	100	361	4.46
D	P7	0	6.4	17.8	14.8	17.4	41.1	2.1	0.4	100	236	4.77
E	P8	0	0	8.8	14.7	29.4	44.1	2.9	0	100	34	5.13
S	F9	0	0	100	0	0	0	0	0	100	1	3.0
										Total	2743	

Table 5.12: Percentage Distributions of SPM grades in English by Performance in SRP

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	n	Mean
S R P G	A1	49.0	22.6	2.2.1	2.2	2.7	1.0	0.4	0	0	100	712	1.92
	A2	3.0	10.8	41.4	15.9	9.5	15.1	3.9	0.4	0	100	232	3.81
	C3	0	1.7	20.2	10.2	12.5	28.1	22.2	4.3	0.9	100	352	5.83
	C4	0	0	6.3	6.3	6.3	27.0	41.4	10.8	1.8	100	111	6.28
R A D E S	C5	0	0	2.4	3.2	14.3	34.9	27.0	17.5	0.8	100	126	6.3
	C6	0	0	0.8	1.3	4.2	20.3	37.7	29.2	6.4	100	236	7.06
	P7	0	0	0.3	0.3	1.6	4.9	31.4	33.8	27.8	100	370	7.8
	P8	0	0	0	0.9	0	0	5.0	30.6	63.4	100	317	8.55
	F9	0	0	0	0	0	0	0.4	6.3	93.3	100	238	8.93
											Total	2694	

The high correlation (0.891) indicates a strong relationship between SRP and SPM English grades. Chi- Square statistics confirms the significant association between the grades of students at the two examinations. Table 5.12 shows that majority of students who obtained A1 for English at the SRP examination, maintained their performance in SPM examination, however the performance of students who scored A2 declined, as majority of these students obtained a C3.

The mean grade of students who achieved C3 and C4 in SRP examination was almost 6 for the SPM examination, which implies a poorer performance in SPM examinations. High percentage of students who had P7 and P8 for SRP English, failed at SPM level.

Table 5.13: Percentage Distributions of SPM grades in Mathematics by Performance in SRP

SPM Grades		A1	A2	C3	C4	C5	C6	P7	P8	F9	Total	n	Mean
S R P G R A D E S	A1	28.8	40.4	22.6	3.2	3.0	1.7	0.3	0	0	100	708	2.81
	A2	5.3	22.4	35.3	10.5	9.5	12.4	3.4	1.1	0.3	100	380	3.54
	C3	0	3.9	20.2	14.2	14.4	26.0	10.8	8.7	1.8	100	381	5.15
	C4	0	0	6.8	8.5	7.7	22.2	25.6	7.7	21.4	100	117	6.59
	C5	0	0	5.0	1.7	10.0	17.5	20.8	18.3	26.7	100	120	7.09
	C6	0	0	1.0	2.4	3.4	17.6	19.0	21.0	35.6	100	205	7.55
	P7	0	0	0	1.4	0	3.1	7.0	13.1	75.4	100	487	8.56
	P8	0	0	0	0	0	0	1.9	7.6	90.5	100	210	8.87
	F9	0	0	3.1	0	0	0	0	0	96.9	100	32	8.86
											Total	2640	

Table 5.13 shows that students who did very well (A1) in SRP Mathematics obtained a grade of A2 or C3 in SPM mathematics, with only 2 percent getting a grade of C6, P7, P8 or F9. Majority of the students who had poor performance (P7, P8 and F9) in SRP Mathematics failed (grade of F9) in SPM Mathematics.

5.6 Summary

The pattern of performance in the three subjects differs slightly. Some similarities in student background and characteristics can be observed in the level of performance of English and Mathematics but generally, wider variation was reflected in the mean grades of these two subjects compared to Bahasa Malaysia grades for most explanatory variables. This could be explained by the fact that these subjects were not made compulsory for further education or employment. On the other hand, a credit in Bahasa Malaysia is required not only for sixth form but for further education or employment in public sector. As such greater emphasis is placed on achieving good results for Bahasa Malaysia. Students' performance in SPM Bahasa Malaysia is slightly better than in the SRP examination. In contrast, the performance in English and Mathematics is lower for the SPM examinations compared to the SRP examinations.