

CHAPTER 4

SAMPLE CHARACTERISTICS

4.1 Introduction

This chapter provides an insight into key characteristics of the respondents. The first part describes the personal background of the students, in terms of their age, gender and ethnicity. The second part describes the social or family background of the students with respect to the socioeconomic background of the guardians and family size (number of siblings in the family). The third part focuses on the educational background of the students with respect to the location and type of school attended, stream or area of specialization and their prior academic achievement.

4.2 Personal Background

4.2.1 Age

Most (63.8 percent) of the form four students are 16 years old, while 36.3 percent are 17

years old. Only 0.4 percent of the sample consists of 18 year-olds. The overall mean age is 16.4 years. All the 18 year-olds in the sample are Chinese. Among the 17 year-olds, 7.3 percent are Malays, 71.5 percent are Chinese and 21.2 percent are Indians or others. Among the 16 year-olds, 67.0 percent are Malays, 13.5 percent Chinese and 19.4 percent Indians and others. The mean age for the Malays is 16.1, for the Chinese 16.8 and for the Indians and others 16.4 years.

The Chinese and Indian students are generally one year older than the Malay students because most of them were from the non-Malay medium primary schools and were required to spend one year in remove classes prior to enrolment in form one.

4.2.2 Sex and Ethnicity

The sample of form four students consists of 39.4 percent boys and 60.6 percent girls (see table 4.1). Over fifty percent (50.2 percent) of the students are Malay students. Among them 26.8 percent are boys and 73.2 percent girls. About thirty-four percent (34.8 percent) of the sample are Chinese students of whom 51.9 percent are boys and 48.1 percent are girls. Among the

Indian students (13.7 percent of the sample), 47.1 percent are boys and 52.9 percent are girls; and of the 1.3 percent of other ethnic groups, 33.3 percent are boys and 66.7 percent are girls.

Excluding the vocational and technical students, the sample gives a total of 32.2 percent Malay boys and 67.8 percent Malay girls (see Table 4.2). Thus giving a total of 42.4 percent boys and 57.6 percent girls enrolled in form four.

The sample consists of a higher number of girls than boys but this is not surprising. At the national level, among students in the academic stream in 1994, there were 84,790 boys (44.3%) compared to 106,752 girls (55.7%) in form four. In the technical and vocational stream, there were 12,875 boys (71.6%) as compared to 5,097 girls (28.4%) in form four. The total number for boys and girls (taking the academic, technical and vocational streams) stood at 97,665 (46.6%) and 111,849 (53.4%) respectively (see Table 3.4).

Likewise in Negeri Sembilan, out of the total enrolment of 8972 form four students in the academic stream, 43.5 percent are boys and 56.5 percent are girls (see Table 3.1).

Table 4.1 : Distribution of Gender by Ethnic Groups (in Form Four).

	Malay	Chinese (percentage)	Indian	Other	Total
Males	26.8	51.9	47.1	33.3	179 (39.4%)
Females	73.2	48.1	52.9	66.7	276 (60.6%)
Total (No.)	228	159	62	6	455

Table 4.2 :Distribution of Gender by Ethnic Groups (in Form Four)
(minus the Vocational and Technical Students).

	Malay	Chinese (percentage)	Indian & Other	Total
Males	32.2	51.9	43.1	164 (42.4%)
Females	67.8	48.1	57.0	222 (57.4%)
Total (No.)	197	138	51	386

4.3 Family Background

4.3.1 Socioeconomic Background of Guardians.

Out of the 455 students, 97.6 percent gave information regarding their parents' education. Among the male students, 5.2 percent reported that their fathers had higher education (a first degree, a professional qualification or higher), 7.5 percent form six or college education, 27.6 percent had upper-secondary education, 24.1 percent had lower-secondary schooling, 32.8 percent had primary schooling and 2.9

percent had no formal schooling. The female students reported that 4.6 percent of their fathers had higher education, 7.2 percent form six or college education, 33.5 percent upper-secondary education, 22.4 percent lower-secondary schooling, 30.5 percent primary schooling and 1.5 percent no formal schooling (see Table 4.3).

Among the male students, 0.6 percent reported that their mothers had higher education, 3.4 percent form six or college education, 16.5 percent had upper-secondary education, 25.0 percent had lower secondary education, 49.4 percent had only primary schooling and 5.1 percent had no formal schooling. The female students reported that 1.9 percent of their mothers had higher education, 3.4 percent form six or college education, 22.4 percent upper-secondary education, 20.9 percent lower-secondary education, 43.7 percent primary schooling and 7.8 percent no formal schooling. Overall, the greatest number of mothers (45.9 percent) had only primary schooling. Only 1.4 percent were educated up to the higher education level, 3.4 percent till form six or college level, 20 percent and 22.5 percent till the upper and lower-secondary level, respectively, and 6.8 percent in the no formal schooling category (Table 4.4).

Looking at ethnic differences, most fathers of the Malay students fall into the upper-secondary educational level while fathers of the Chinese students fall in the primary schooling level and the fathers of the Indian students fall in the lower-secondary school level (Table 4.5). For all ethnic groups, most of the mothers had only primary schooling (Table 4.6). On the whole, fathers tend to be more highly educated than mothers.

Table 4.3 : Father's Education by Gender

Level of Education	Male (in percentage)	Female (in percentage)	Total No.
1. Higher Institutions of Education (University or Equivalent)	52	46	21 (48%)
2. HSC/STPM/ Form Six/College	7.5	7.2	32 (7.3%)
3. MCE/SPM/Form 4/ Form 5	27.6	33.5	136 (31.1%)
4. SRP/Form 1- 3	24.1	22.4	101 (23.1%)
5. Primary School	32.8	30.5	137 (31.4%)
6. No formal schooling	2.9	1.5	9 (21%)
Total (no.)	174	262	436

Table 4.4 : Mother's Education by Gender

Level of Education	Male (in percentage)	Female (in percentage)	Total No.
1. Higher Institutions of Education (University or Equivalent)	0.6	1.9	6 (1.4%)
2. HSC/STPM/ Form Six/College	3.4	3.4	15 (3.4%)
3. MCE/SPM/Form 4/ Form 5	16.5	22.4	89 (20.0%)
4. SRP/Form 1- 3	25.0	20.9	100 (22.5%)
5. Primary School	43.7	43.7	204 (45.9%)
6. No formal schooling	5.1	7.8	30(6.8)
Total (no.)	176	268	444

equipment operators and labourers. Among the fathers of the students, the greatest percentage (32.4 percent of the males and 28.0 percent of the females students) reported their fathers work as production workers and labourers.

Among the students, 4.5 percent reported that their mothers were working as professionals, technical and related workers, 0.7 percent as administrative and managerial workers, 3.1 percent as clerical and related workers, 4.9 percent as sales workers, 1.8 percent as sales workers, 4.9 percent as service workers, 7.8 percent as agricultural, animal husbandry and forestry workers and 6.7 percent as production workers and labourers. The majority of the mothers, irrespective of gender and ethnicity, were housewives or retired workers (72.2 percent).

Table 4.7 gives the distribution of the father's and mother's occupations among the ethnic groups. The table shows that most Malay fathers (23.3 percent) work as service workers, Chinese fathers (40.5 percent) as production workers and labourers although a high percentage of them (28 percent) are sales workers. Fathers of students of Indian origin (29.8 percent) work mostly as production workers and labourers. Among working

mothers, regardless of ethnic origin, most were engaged as production workers and labourers.

Table 4.7: Distribution of Parental Occupations Among the Ethnic Groups.

	Father				Total (no.)	Mother				Total (no.)
	M	C	I	O		M	C	I	O	
	(in percentage)					(in percentage)				
1. Professional, technical related workers.	10.4	3.9	14.3	-	39 (8.8%)	5.0	1.9	8.3	-	20 (4.5%)
2. Administrative and managerial workers	5.4	2.0	3.6	16.7	18 (4.1%)	1.0	0.6	-	-	3 (0.7%)
3. Clerical and related workers	5.9	1.3	9.5	-	22 (5.0%)	5.9	-	2.4	-	14 (3.1%)
4. Sales workers	7.9	28.8	14.3	-	71 (16.0%)	3.5	5.8	7.1	-	8 (1.8%)
5. Service workers	23.3	5.2	11.9	-	65 (14.6%)	1.0	2.6	2.4	-	22 (4.9%)
6. Agricultural, animal husbandry and forestry workers.	13.4	7.8	9.5	33.3	49 (11.0%)	1.0	7.1	10.7	-	35 (7.8%)
7. Production workers and labourers.	21.3	40.5	29.8	33.3	132 (29.7%)	6.4	7.1	11.9	16.7	30 (6.7%)
8. Retired, deceased, not working/ housewives	12.9	10.5	7.1	16.7	4 (11.0%)	76.2	74.8	57.1	83.3	323 (72.2%)
Total (no.)	223	155	61	6	445	224	156	61	6	447

M = Malay, C = Chinese, I = Indian, O = Other

Looking at the family income of the students, 37.2 percent reported that their family income fell below RM500, 41.3 percent reported that their family income fell within the RM501 - 1000 range, 6.8 percent within RM1001 - 1500, 6.3 percent within RM1501 - 2000, 1.8 percent within RM2001 - 2500, 3.6 percent within RM2501 - 3000 and 2.9 percent above RM3001. Among the students, the majority reported a family income between

RM501 -1000, although quite a high percentage of the male and female students (32.2 percent and 40.4 percent respectively), come from the 'below RM500' income category. Most students in this survey are not from well-to-do families (Table 4.8).

The distribution of family income among the ethnic groups is given in Table 4.9. It can be seen that the majority of the Malay students have a family income of below RM500. The Chinese and Indian students have a family income of RM501 -1000.

Table 4.8 - Family Income by Gender.

Family Income (RM)	Gender (%)		Total No. (%)
	Male	Female	
below 500	32.2	40.4	165 (37.4)
501 - 1000	42.1	40.8	183 (41.2)
1001 - 1500	8.8	5.5	30 (6.8)
1501 - 2000	7.6	5.5	28 (6.3)
2001 - 2500	1.8	1.8	8 (1.8)
2501 - 3000	2.9	4.0	16 (3.6)
above 3000	4.7	1.8	13 (2.9)
Total no.	171	272	443

Table 4.9 - Family Income by Ethnic groups

Family Income (RM)	Ethnic Group (in percentage)				Total No.
	Malay	Chinese	Indian	Other	
below 500	52.0	27.7	21.4	20.0	166
501 - 1000	32.5	47.7	48.8	60.0	183
1001 - 1500	3.5	9.7	8.3	20.0	30
1501 - 2000	6.5	5.2	8.3	-	28
2001 - 2500	1.0	1.3	4.8	-	8
2501 - 3000	3.0	4.5	3.6	-	16
above 3000	1.5	3.9	4.8	-	13
Total no.	223	15	61	5	444

4.4.1 Location of School

Two hundred twenty-four (49.3 percent) of the students are from urban schools while the rest are from rural schools. Among the male students, 53.6 percent are from urban schools while 46.4 percent are from the rural schools. Among the female students, 38.5 percent are from urban and 61.5 percent are from rural schools. By excluding the vocational and technical students (since they are a minority in this survey), among the male students, 52.6 percent are from urban schools and 47.4 percent from rural schools. 47.1 percent of the female students are from urban schools while 52.9 percent are from rural schools (Table 4.10).

Table 4.10 Distribution of Students by Urban-Rural Location.
(excluding Vocational and Technical students)

Location	Males	Females	Total No.
Rural	83 (47.4%)	118 (52.9%)	201 (50.5%)
Urban	92 (52.6%)	105 (47.1%)	197 (49.5%)
Total	175	223	398

4.4.2 Type of Primary School Attended

Over sixty-seven percent of the students (67.1 percent) come from National primary schools, 25.2 percent from the Chinese primary schools, 7.3 percent

from the Tamil primary schools and 0.4 percent from other types of primary schools, such as the religious primary schools. Table 4.11 gives the distribution of students in the primary schools by gender. Among the male students, 60.9 percent were from National primary schools, 33.2 percent were from the Chinese primary schools, 5.6 percent from the Tamil primary schools and 0.3 percent from other primary schools. Of the female students, 71.2 percent were from the national primary schools, 19.7 percent from the Chinese primary schools, 8.4 percent from the Tamil primary schools and 0.7 percent from other types of primary schools.

Table 4.11
Distribution of Students in the Primary Schools by Gender.

Type of Primary School	Male	Female	Total (No.)
	(in percentage)		
National	60.9	71.2	304 (67.1%)
Chinese	33.2	19.7	114 (25.2%)
Tamil	5.6	8.4	33 (7.3%)
Others	0.3	0.7	2 (0.4%)
Total (No.)	179	274	453

4.4.3 Stream or Area of Specialization.

Although there are three major streams: Science or Technical, Arts, and Vocational, the KBSM system now allows students to select elective subjects

from the major groups (See Appendix 3.1 for an outline of the KBSM - SPM Major subject Groups). Nine academic combinations of subjects are recorded. The distribution of students by these academic combinations is given in Table 4.12 below.

Table 4.12
Distribution of Students by Academic Combinations according to Gender.

Combinations	Male (in percentage)	Female (in percentage)	Total (No.)
1. Pure Science	31.5	15.8	96 (21.8%)
2. Science and Principles of Account	4.2	5.1	21 (4.8%)
3. Pure Arts	36.9	29.3	142 (32.2%)
4. Arts and Principles of Account	10.1	24.5	84 (19%)
5. Arts and Additional Mathematics	1.2	0.4	3 (0.7%)
6. Arts, Accounts and Additional Mathematics	13.7	6.2	40 (9.1%)
7. Vocational, Technical and Others	2.4	18.7	55 (12.4%)
Total (No.)	168	274	442

Among the male students, a large number (31.5 percent) are in pure science and 36.9 percent in pure arts. However, the girls tend to opt for pure arts (29.3 percent) or take a combination of arts and principles of accounts (24.5 percent). Overall, a total of 21.8 percent of the students opted for pure science and 4.8 percent took a combination of science and principles of accounts. About thirty-two percent (32.2 percent) are in pure arts, 19.0 percent takes a combination of arts and principles of accounts, 0.7 percent of the arts students take additional mathematics and 9.1 percent of the arts students take principles of

accounts and additional mathematics. About twelve percent (12.4 percent) of the students are in vocational and technical schools or other.

Table 4.13 gives a breakdown of the students' academic combinations according to ethnic groups. Among the Malay students, the largest number are enrolled in pure arts (43.2 percent) and a high percentage of them are in vocational and technical schools (26.6 percent). Among the Chinese students, the largest number are in the pure science stream (26.3 percent) although a high percentage of the students are in the arts stream taking elective subjects of principles of accounts (22.4 percent) and additional mathematics (24.4 percent). Among the Indian students, the largest number (32.9 percent) are in the pure arts stream although a high percentage are in the science stream (28.0 percent).

Table 4.13
Distribution of Students by Academic Combinations according to Ethnic Groups.

Combinations	M	C	I	O	Total
			(in percentage)		
1. Pure Science	16.0	26.2	28	60.0	21.8
2. Science and Principles of Account	1.0	8.3	8.5	-	4.8
3. Pure Arts	43.2	17.2	32.4	40.0	32.2
4. Arts and Principles of Account	15.0	22.3	26.8	-	19.0
5. Arts and Additional Mathematics	-	1.3	2.4	-	0.7
6. Arts, Accounts and Additional Mathematics	1.0	24.3	-	-	9.1
7. Vocational, Technical and Others	23.6	0.6	1.2	-	12.4
Total (No.)	225	153	595	5	442

M=Malay, C= Chinese, I= Indian, O=Other

4.4.4 Prior Academic Performance.

Academic performance is graded through the UPSR, PMR and normally the school examination grades. For this survey, the students were asked to state their UPSR, PMR and their form four final-year examination results.

Tables 4.14, 4.15 and 4.16 give the distribution of students by UPSR, PMR and form four results according to gender. Most students (70 percent) of both genders obtained 2 or 3 distinctions in the UPSR examination (table 4.14). They are considered average achievers. However in the PMR examination, 6.8 percent scored more than 6 distinctions, 13.0 percent scored 4 or 5 distinctions, 37.2 obtained between 1 and 3 distinctions and a high percentage of the students (42.9 percent) did not obtained any distinctions (table 4.15). The latter are regarded as poor achievers. Almost forty-five percent of the boys fall under this category while about 42 percent of the girls scored between 1 to 3 distinctions each (table 4.15). In form four, the highest proportion of the students were Grade 2 holders (34.4 percent), although a high percentage of them are Grade 1 holders (25.0 percent). Among the boys, 35.5 percent

failed in the examination, 15.1 percent obtained grade 3, 24.4 percent obtained Grade 2 and 25.2 percent obtained Grade 1. Among the girls, only 19.0 percent failed, 15.3 percent obtained Grade 3, 40.7 percent obtained Grade 2, and 24.4 percent obtained Grade 1. There are fewer failures among the girls but a higher percentage of boys obtained Grade 1 (Table 4.16). However, the results are not conclusive, as 147 students did not respond to the question on form four grades.

Table 4.14
Distribution of Students by UPSR results according to Gender.

No. of Distinctions (As)	Male (in percentage)	Female (in percentage)	Total (%)
1 or none	6.7	3.7	4.9
2 - 3	62.9	74.7	70.0
4 or none	30.3	21.6	25.1
Total No.	178	270	448

Table 4.15
Distribution of Students by PMR results according to Gender.

No. of Distinctions (As)	Male (in percentage)	Female (in percentage)	Total (in percentage)
More than 6	9.5	5.1	6.8
4 - 5	16.2	10.9	13.0
1 - 3	29.6	42.2	37.2
None	44.7	41.8	42.9
Total No.	179	276	455

Table 4.16
Distribution of students by Form Four Grades according to gender.

Grades ³⁹	Male (in percentage)	Female (in percentage)	Total (in percentage)
1	25.2	24.4	25.0
2	24.4	40.7	34.4
3	15.1	15.3	15.3
0 (fail)	35.3	19.0	25.3
Total no.	119	190	309

A look at the UPSR results among the ethnic groups (Table 4.17) indicates that irrespective of ethnicity, the highest number of students scored 2 or 3 distinctions. As for the PMR results, Table 4.18 shows that irrespective of ethnicity too, the highest number of students are poor achievers or average achievers, obtaining no distinctions (43.1 percent) and between 1 and 3 distinctions (37.1 percent). A look at the form four results indicates that over forty percent of the Malay students obtained Grade 2 (42.9 percent), while a high percentage obtained Grade 3 (23.5 percent). One-third of the Chinese students (33.3 percent) failed in the examination, although 29.5 percent and 28.0 percent obtained Grade 2 and Grade 1 respectively. Among the Indian students, the highest number of them obtained Grade 1 (31.0 percent) while 27.6 percent obtained Grade

³⁹ Form Four Grades in this study are categorized according to the aggregates of the students: 1 = aggregate 1 to 24, 2 = aggregate 25 to 34, 3 = aggregate 35 to 44 and 0 = fail or do not qualify for an SPM certificate. The lower the value of the grades, the better is the result.

2 and 29.3 percent failed in the examination (see Table 4.19).

Table 4.17
Distribution of students by UPSR Results according to ethnic groups.

No. of Distinctions (As)	M	C	I	O	Total
	(in percentage)				
1 or none	3.9	7.7	1.2	-	4.9
2 - 3	80.0	59.6	63.5	40.0	70.0
4 or none	16.1	32.7	35.3	60.0	25.1
Total No.	228	155	60	5	448

M=Malay, C= Chinese, I= Indian, O=Other

Table 4.18
Distribution of students by PMR Results according to ethnic groups.

No. of Distinctions (As)	M	C	I	O	Total
	(in percentage)				
More than 6	2.5	12.6	8.2	-	6.8
4 - 5	7.3	22.0	11.8	-	13.0
1 - 3	42.0	30.2	34.1	66.7	37.1
None	48.2	35.2	45.9	33.3	43.1
Total No.	228	159	62	6	455

M=Malay, C= Chinese, I= Indian, O=Other

Table 4.19
Distribution of students by Form Four Grades according to ethnic groups.

Grades	M	C	I	Total
	(in percentage)			
1	18.5	28.0	31.0	25.0
2	42.9	29.5	27.6	34.3
3	23.5	9.1	12.1	15.2
0 (fail)	1.5	33.3	29.3	25.6
Total (in percentage)	50.8	34.7	13.3	100.0

M=Malay, C= Chinese, I= Indian, O=Other

Students who failed their form four failed to meet two conditions. The first is a pass in the Bahasa Melayu paper and two passes in any two elective papers. Secondly, they must obtain at least a pass in

six subjects inclusive of *Bahasa Melayu*. In this case, the high failure rate (33.3 percent) among the Chinese is due to failure in the *Bahasa Melayu* paper (31.6 percent failed) while 1.7 failed because of their failure to meet the other conditions. Among the Indian students, only 10.1 percent failed in the *Bahasa Melayu* paper while 19.2 percent failed due to their failure to meet the other conditions. The lowest failure in the *Bahasa Melayu* paper is among the Malays with only 0.8 percent failure while 14.2 failed because of they were not able to meet the other conditions; (See Table 4.20 and Appendix 4.1 for more details on the conditions required to obtain an SPM certificate).

Table 4.20 : Percentage passes and failures in the *Bahasa Melayu* paper in the form four grades by ethnic groups.

Subject <i>Bahasa Melayu</i>	Ethnic Group:		
	Malay	Chinese	Indian & Others
Grade 1 - 6	82.4	53.7	75.4
7 - 8	16.8	22.1	14.5
9 (fail)	0.8	31.6	10.1

4.5 Summary

This chapter describes the principal characteristics of the respondents. A total of 455 students responded to the survey. The respondents comprised of 50.2 percent Malays, 34.8 percent Chinese, 13.7 percent Indians and 1.3 percent others. In terms of

gender, 39.4 percent are boys and 60.6 percent are girls. Due to some technical problems, the vocational boys who were supposed to be surveyed all did not respond to the questionnaires. Thus only the vocational girls were surveyed giving an uneven distribution of vocational students according to gender. Excluding vocational and technical students, 42.4 percent are boys and 57.4 percent are girls. In actual fact, the enrolment of girls in secondary schools in Negeri Sembilan is higher than that among boys.

Overall, most of the students are from families with 4 siblings - which is an average sized family. Most of the fathers of the students are educated until the upper-secondary level. By ethnicity, most fathers of the students of Malay origin fall into the upper-secondary level, fathers of the Chinese students in the primary schooling level and the fathers of the Indian students in the lower-secondary level. Most mothers fall into the primary schooling level (for all ethnic groups). On the whole, fathers appeared to be more highly educated than mothers. Taking into account the occupations of the parents, most of the fathers are production workers and labourers. However, a very high percentage of the mothers are housewives or retired workers. Among those who are working most work as production workers and labourers.

With regards to family income, the highest percentage of the students come from families with an average family income of RM501 - 1000, the Malays forming the group with the lowest family income (below RM500).

In terms of educational background, 49.5 percent of the students come from urban schools and the highest percentage of them are from National primary schools (67.1 percent). On the whole, 26 percent of the students are in the science stream, 61 percent in the arts stream and 12 percent in the vocational or technical stream. The highest percentage of the Malay and Indian students are in the arts stream while the Chinese are in the science stream.

Finally, looking at the academic results, most students are average grade students in the primary school, the a highest percentage are poor achievers at the PMR level and in Form four, most of them obtained Grade 2. Although the findings showed that there are fewer failures among the girls, there is a higher percentage of boys who obtained Grade 1. Among the Malays, the modal achievement grade was Grade 2, but the mode for the Chinese is a failure. Among the Indian students, on the other hand, Grade 1 was the mode.