CHAPTER FOUR
RESULTS AND INTERPRETATIONS

Introduction

This chapter discusses the analysis of the data collected from the three questionnaires, interpretation of the results and their significance as they relate to the research questions. More specifically this chapter focuses on the following areas:

1. the background characteristics of Malay ESL university students;
2. their perceptual learning style preferences;
3. the relationship between selected personal variables of these students and their learning style preferences;
4. the learning strategies these students use in ESL learning;
5. the relationship between selected personal variables of these students and their learning strategies; and
6. the relationship between the learning style preferences of these students and their learning strategies.

Background Characteristics of the Respondents

The background characteristics of the respondents are shown in Table 4.1. The respondents for this study were drawn from an institution of higher learning in the Klang Valley. Racially they were homogeneous, that is, they were all Malay students. In terms of gender, 21.9 percent were male respondents while the rest were female respondents. This reflects the general trend in the institutions of higher learning in the country where the female students

outnumber the male students. Majority of the respondents (90.5 percent) were between the age of 18 – 20 years while the rest were between the age of 21 – 25 years. Therefore, they were generally fairly homogenous where their age is concerned.

The respondents were drawn from three different fields of study, that is, 30.7 percent were Business Management students, 29.9 percent were pursuing a Secretarial Science course while the third group was from the Computer Science course, 39.4 percent. This is in keeping with one of the objectives of the study, which was to determine whether field of study influenced the perceptual learning styles of the respondents.

In terms of proficiency in the English language, based on the respondents' performance in the Foundation English Language Programme Examination, 21.9 percent obtained grade A, 30.7 percent obtained grade B, 27.7 percent obtained grade C while the remaining 19.7 percent obtained grade D. This shows that the respondents were heterogenous for language proficiency, a factor which has been identified by Reid (1987) as having a possible influence on learning style preferences.

Table 4.1
Background Characteristics of the Respondents

Variables	Frequency	Percentage
Gender		
Male	30	21.9
Female	107	78.1
Age		
18 -20	124	90.5
21 -25	13	9.5
Field of Study		
Business Management	42	30.7
Secretarial Science	41	29.9
Computer Science	54	39.4
Proficiency in the English Language(Grade in Foundation English Test)		
A	30	21.9
B	42	30.7
C	38	27.7
D	27	19.7
Language spoken at home		
Bahasa Malaysia	135	98.5
Bahasa Malaysia and English	2	1.5
Number of Years Studying English Language		
12	3	2.2
13	12	8.8
14	122	89.1
Other Languages studied		
None	100	73.0
French	9	6.6
Mandarin	10	7.3
Arabic	13	9.5
Others	5	3.6
Self-Rating of English Proficiency		
Good	40	29.2
Fair	89	65.0
Poor	8	5.8

Table 4.1
Background Characteristics of the Respondents (cont.)

Variables	Frequency	Percentage
English Proficiency compared to other students(self-rating)		
Good	8	5.8
Fair	82	59.9
Poor	47	34.3
How important is it to become proficient in English Language		
Very important	101	73.7
Important	34	24.8
Not important	2	1.5
Reason for learning English Language		
Interested in the Language		
Yes	115	83.9
No	22	16.1
Interested in the Culture		
Yes	33	24.1
No	104	75.9
Have friends who speak the language		
Yes	107	78.1
No	30	21.9
Required to pass the language to graduate		
Yes	116	84.7
No	21	15.3

Table 4.1
Background Characteristics of the Respondents (cont.)

Variables	Frequency	Percentage
Need the language for future career		
Yes	137	100
No	0	0
Need it for travel		
Yes	115	83.9
No	22	16.1
Enjoy learning the language		
Yes	135	98.5
No	2	1.5

For majority of the respondents (98.5 percent), the language spoken at home is the Malay language. However, they have had formal English Language lessons for 12 to 14 years. For most of these respondents (73 percent), the English language is the only second language that they have studied formally, although there was a small proportion (27 percent) who were learning other languages such as French, Mandarin, Arabic and others.

When the respondents were asked to rate themselves in terms of their proficiency in the English language, 29.2 percent rated themselves as being good, 65 percent as fair, and only a small proportion, 5.8 percent, rated their English proficiency as poor. However, when they were asked to compare their proficiency in the English language with that of their peers, only 5.8 percent rated themselves as good, 59.9 percent as fair and 34.3 percent (nearly one-third) of

the respondents rated themselves as poor. This shows that most of the respondents perceive themselves as being fairly proficient in the English language.

The respondents were also asked several additional questions in order to gauge their reasons and motivation for learning the English language. When asked how important it was for them to learn the English language, nearly three quarters of the students (73.7 percent) stated that it was very important, while the remainder (24.8 percent) stated that it was important. The number of students who did not consider it important to learn the language was practically negligible (1.5 percent).

The reasons given by the respondents for studying the language were, interest in the language (83.9 percent), having friends who speak the language (78.1 percent), required to pass the language in order to graduate (84.7 percent), need the language for future career (100 percent), need it to travel (83.9 percent) and enjoy learning the language (98.5 percent). Generally, the majority of the respondents had a positive attitude towards learning the English language. This is a good sign since attitude has been found by some researchers to be an important variable in second language learning. Oxford (1987) says, "it is impossible to overstate the importance of the affective factors influencing language learning" (p. 141). Brown (1987) further adds that attitudes are strong predictors of motivation especially in language learning. Positive emotions and attitudes make language learning more effective and enjoyable.

An interesting finding in this study is that more than three quarters of the students (75.9 percent) stated that they were not interested in the culture associated with English language while less than a quarter (24.1 percent) stated that they were interested in the culture. Since culture has been found to influence ESL learning styles (Reid, 1987), the question arises as to whether a learner needs to immerse in the culture associated with ESL to become proficient in the language. In other words, would a disinterest in the cultural aspect of a language that is being learned impede the learner from learning the language?

The fact that all of the respondents said their reason for learning the language was that they would need it for their careers, together with more than 75 percent saying that they were not interested in the culture associated with the language, suggests that their motivation for learning the language was instrumental rather than integrative (Gardner and Lambert, 1972).

Research Question 1:
What are the Perceptual Learning Style Preferences of Malay ESL Students in a Local University?

This section focusses on the perceptual learning style preferences of the respondents. The distribution of respondents according to major, minor and negligible learning style preferences is shown in Table 4.2.

Table 4.2
Distribution of Respondents According to Their Learning Style Preferences

Learning Style	Learning Style Preferences(In Terms of Percentage)		
	Major	Minor	Negligible
Visual	31.4	62.8	5.8
Auditory	56.9	40.1	2.9
Kinesthetic	73.7	24.1	2.2
Tactile	62.0	35.0	2.9
Group	75.9	21.2	2.9
Individual	21.9	53.3	24.8

When the percentage of respondents falling into a particular learning style category exceeds 50 percent, the respondents are treated as belonging to that category for the particular learning style. The respondents displayed major preferences for auditory (56.9 percent), kinesthetic (73.7 percent), tactile (62.0 percent) and group (75.9 percent) learning styles and minor preferences for visual (62.8 percent) and individual (53.3 percent) learning styles. This finding differs from that of Reid's (1987). This result also slightly differs from the findings of several other researchers like Rossi-Le (1989) and Stebbins (1990). According to these researchers, non-native speakers generally have kinesthetic, tactile and group as their major ESL learning style preferences.

In Reid's (1987) study, Malay students were found to display a major preference for kinesthetic and tactile learning styles and minor preference for visual, auditory, individual and group learning styles. The major preference for auditory and group learning styles in variance with that of Reid's study could be attributed to the fact that this study was carried out in Malaysia as opposed to

that of Reid's (1987) which was carried out in America. As Reid (1987) has suggested, the host culture could have had an influence on her findings. Having a preference for auditory and group learning styles is in keeping with the culture of the Malays. Their preference for auditory learning style could be derived from their emphasis on oral traditions where values, norms, rituals and stories are passed down orally through the generations (Abdullah, 1996). Their preference for group learning as opposed to individual style can again be attributed to the culture of the Malays. Abdullah (1992) in her book, "Understanding the Malaysian Workforce" suggests that Malaysians, regardless of ethnicity are generally group-oriented. According to her, most Malaysians especially the Malays feel that they have no identity unless they belong to a group. Another possible reason Malays prefer to work in groups is that it helps in "preserving face" (*jaga maruah* in Malay): when mistakes are committed, any derision will be directed at the group and not at the individual and thereby the person is spared embarrassment.

The preference for kinesthetic, tactile, auditory and group learning styles could also be due to the fact that these are the teaching styles that the respondents have been used to throughout their primary and secondary school education in the Kurikulum Bersepadu Sekolah Rendah, KBSR (Integrated Primary School Curriculum) and Kurikulum Bersepadu Sekolah Menengah, KBSM (Integrated Secondary School Curriculum) English classrooms. Among the recommended activities suggested by the Curriculum Development Centre,

Ministry of Education, Malaysia, for teaching English in the KBSR and KBSM English curriculum are role play (kinesthetic learning) and use of task cards (tactile learning), both of which are carried out in groups. Cornett (1983) and Marshal (1991) have found that teachers' styles have great impact on the learning style preferences of their students. Many ESL students who have completed the bulk of their formative schooling in a particular learning forum will require a compelling rationale and meticulous preparation for a successful transition to a different model of teaching and learning that invites students to become active generators of their own knowledge (Cummins, 1989).

Research Question 2:
Is there a Relationship between Personal Variables of These Students and Their Perceptual Learning Style Preferences?

An analysis of the relationship between age, number of years of studying the English language, language proficiency, gender, field of study and perceptual learning style preferences of the respondents was carried out in order to determine whether these personal variables influenced the perceptual learning styles of the students.

Relationship between Age and Perceptual Learning Styles

Pearson Product Moment Correlation was carried out to determine whether there was relationship between age and perceptual learning style preferences of the respondents. The results in Table 4.3 show that there is significant negative correlation between age and kinesthetic learning style

preference ($r = -0.176$, $p < 0.05$) and between age and tactile learning style preference ($r = -0.328$, $p < 0.05$. This implies that as students get older their preferences for kinesthetic and tactile learning styles decrease.

Table 4.3
Relationship between Age and Perceptual Learning Styles

Perceptual Learning Styles	r	p
Visual	-0.002	0.980
Auditory	-0.126	0.144
Kinesthetic	-0.176	0.040*
Tactile	-0.328	0.000*
Group	-0.153	0.075
Individual	-0.016	0.980

* Significant at p = 0.05 level

This finding though not identical to that of Reid's (1987), Rossi-Le (1989) and Stebbins (1990), does give some credence to their findings. Although Reid (1987) did not find negative relationship between age and kinesthetic and tactile learning styles, she found that the learning style preferences of older students were more clearly delineated with visual and auditory modalities being the strongest (Reid, 1987). Other studies have also identified visual dominance among adult learners (Cherry, 1981; Galbraith and James, 1984; Keefe, 1987; Price, Dunn and Saunders, 1981; and Rossi-Le, (1989). The research of Barbe and Milone (1981) illustrates shifts that occur in learning style preferences as individuals mature and develop. Students falling into the high school age groups and adults show more visual and auditory dominance. However, the findings of this study should be viewed with caution since the respondents of this study fall

within a narrow age group (over 90 percent of the respondents are between 18 – 20 years of age).

Number of Years of Studying the
English Language and Perceptual Learning Styles

Pearson product moment correlation was used to determine the relationship between the number of years the students had formally studied the English language with their perceptual learning style preferences. As shown in Table 4.4, the number of years the students had studied the language was found to correlate negatively with kinesthetic ($r = -0.202$, $p < 0.05$), tactile ($r = -0.187$, $p < 0.05$) and group ($r = -0.272$, $p < 0.05$) learning style preferences and positively with individual learning style preference ($r = 0.181$, $p < 0.05$).

Table 4.4
Number of Years Spent Learning English Language
and Perceptual Learning Styles

Perceptual Learning Styles	r	p
Visual	-0.014	0.870
Auditory	-0.102	0.234
Kinesthetic	-0.202	0.018*
Tactile	-0.187	0.029*
Group	-0.272	0.001*
Individual	0.181	0.034*

Note: * Significant at p = 0.05 level

This suggests that the longer the students study the language the less they are likely to use the kinesthetic, tactile and group learning styles. They also develop increasing preference for individual learning style. This finding is somewhat similar to that on age and learning style where the older the students the less they would have preferences for kinesthetic and tactile learning styles. The

decreasing preference for group and an increasing preference for individual learning style is understandable because as they become older they tend to become more autonomous learners.

Language Proficiency and Perceptual Learning Styles

The grades obtained by the respondents in their Foundation English Language Examination was used as a measure of language proficiency. Since this is ordinal data, the Spearman's rank order correlation was used to determine whether there was a relationship between language proficiency and learning style preferences.

Table 4.5
Language Proficiency and Perceptual Learning Styles

Perceptual Learning Styles	Spearman's rho(ρ)	p
Visual	0.061	0.483
Auditory	0.052	0.545
Kinesthetic	0.061	0.477
Tactile	0.069	0.468
Group	-0.240*	0.005
Individual	0.184*	0.032

Note: * Significant at p = 0.05 level

The results on Table 4.5 show that there was a significant negative correlation between language proficiency and group learning style ($\rho = -0.240$, $p < 0.05$). There was however a significant positive correlation between language proficiency and individual learning style ($\rho = 0.184$, $p < 0.05$). This is similar to the findings regarding years of studying the language and learning styles. The assumption here is that the longer the students learn the language the more

proficient they become and with proficiency in the language there is a shift from group learning style towards individual learning style preference.

Comparison of the Perceptual Learning Style Preferences by Gender

From Table 4.6 it can be seen that the majority of both male and female respondents rated themselves as having major preferences for tactile (61.3 percent of the male students and 62.3 percent of the female students), kinesthetic (71.0 percent of the male students and 79.2 percent of the female students) and group (83.9 percent of the male students and 73.6 percent of the female students) learning styles. They rated themselves as having minor preferences for visual (58.1percent of the male students and 65.1percent of the female students) and individual (65.1 percent of the male students and 49.1 percent of the female students) learning styles. However, they differed for the auditory learning style. The female students rated themselves as having major preference for auditory learning style (67.0 percent of the female students) while the male students had minor preference for this style (58.1percent of the male students).

Table 4.6
Learning Style Preferences by Gender (in Percentage)

Learning	Major		Minor		Negligible	
Style	Male	Female	Male	Female	Male	Female
Visual	25.8	32.1	58.1	65.1	16.1	2.8
Auditory	41.9	67.00	58.1	32.1	0	0.9
Tactile	61.3	62.3	32.3	37.7	6.5	1.9
Kinesthetic	71.0	79.2	25.8	18.9	3.2	1.9
Group	83.9	73.6	12.9	23.6	3.2	2.8
Individual	16.1	23.6	54.8	49.1	29.0	27.4

This is consistent with the research by Oxford (1993) who found female learners to be auditory preferring to converse, discuss and do group work. Although Oxford (1993) suggests that the male students were more likely to be tactile (preferring manipulating objects) and kinesthetic (preferring total body movements) compared to female students, no such difference was found in this study. The study showed that both male and female students were major for kinesthetic and tactile learning styles.

In order to determine whether the difference between the male and female students for auditory learning style preference was statistically significant, a t-test was carried out. The results of the t - test are shown in Table 4.7.

Table 4.7
T-Test for Learning Styles by Gender

Learning Style	Gender	N	Mean	Standard Deviation	t-value	df	p
Visual	Male	30	16.33	3.02	-1.323	135	0.188
	Female	107	17.12	2.84			
Auditory	Male	30	17.43	2.51	-2.280	135	0.024*
	Female	107	18.74	2.84			
Kinesthetic	Male	30	19.97	2.86	-0.352	135	0.725
	Female	107	20.21	3.55			
Tactile	Male	30	18.80	3.33	-0.610	135	0.543
	Female	107	19.27	3.84			

Table 4.7
T-Test for Learning Styles by Gender (cont.)

Learning Style	Gender	N	Mean	Standard Deviation	t-value	df	p
Group	Male	30	21.00	2.98	1.369	135	0.173
	Female	107	19.93	3.96			
Individual	Male	30	14.23	4.00	-0.956	135	0.341
	Female	107	15.02	3.97			

Note: * Significant at p = 0.05 level

The results show that there was significant difference between the male and female respondents in their preference for auditory learning style ($t = -2.280$, $p < 0.05$). The female respondents (mean = 18.74, S.D. = 2.84) were found to have a significantly higher preference for auditory learning style compared to the male respondents (mean = 17.43, S.D. = 2.51). This is consistent with the findings by Dunn, Beaudry and Klavas, (1989). They found that female students required less physical mobility when studying compared to male respondents. Halpern (1996), in Woolfolk, 1998, found that male students were more mechanical and visual compared to female students. The lack of significant difference between the male and female respondents for the kinesthetic and tactile learning styles could be due to the lower proportion of male respondents in this study compared to the female respondents. The male respondents only constitute about one fifth of the sample and this might have contributed to a lower mean value for male respondents compared to the female respondents.

Relationship of Field of Study to Perceptual Learning Style Preferences

The learning style preferences of the respondents according to their fields of study are shown in Table 4.8.

Table 4.8
Field of Study and Perceptual Learning Style Preferences (Percentage)

Field of Study	Level	Learning Style					
		Visual	Auditory	Tactile	Kinesthetic	Group	Individual
Business Studies	Major	21.4	61.9	61.9	71.4	71.4	33.3
	Minor	73.8	35.7	31.0	26.2	23.8	45.2
	Negligible	4.8	2.4	7.1	2.4	4.8	21.4
Secretarial Science	Major	34.1	58.5	41.5	73.2	68.3	17.1
	Minor	61.0	41.5	58.5	26.8	29.3	56.1
	Negligible	4.9	0	0	0	2.4	26.8
Computer Science	Major	35.2	63.0	77.8	85.2	85.2	16.7
	Minor	57.4	37.0	20.4	11.1	13.0	50.0
	Negligible	7.4	0	1.9	3.7	1.9	33.3

The Business Management and Computer Science respondents rated themselves as having major preferences for kinesthetic (71.4 percent of the Business Management respondents and 85.2 percent of the Computer Science students), auditory (61.9 percent of the Business Studies respondents and 63 percent of the Computer Studies respondents), tactile (61.9 percent of the Business Studies students and 77.8 percent of the Computer Science respondents) and group (71.4 percent of the Business Studies respondents and 85.2 percent of the Computer Science respondents) learning styles. These respondents also rated themselves as having minor preferences for visual (73.8 percent of the Business Studies respondents and 57.4 percent of the Computer Science respondents) and individual (45.2 percent of the Business Studies respondents and 50 percent of the Computer Science respondents) learning

styles. The majority of the Secretarial Science respondents rated themselves as having major preferences for auditory (58.5 percent of the respondents), kinesthetic (73.2 percent) and group (68.3 percent) learning styles and minor preference for visual (61 percent), tactile (58.5 percent) and individual (56.1 percent) learning styles.

Table 4.9
One-way ANOVA to Compare the Perceptual Learning Styles by Field of Study

Learning Style Preference	Field of Study	Mean	F value	P
Visual	Business Management	33.33	0.111	0.895
	Secretarial Science	33.59		
	Computer Science	34.59		
Auditory	Business Management	36.42	1.229	0.296
	Secretarial Science	35.29		
	Computer Science	37.87		
Kinesthetic	Business Management	39.02	2.752	0.067
	Secretarial Science	39.39		
	Computer Science	42.09		
Tactile	Business Management	38.10	4.168	0.018*
	Secretarial Science[a]	35.83[a]		
	Computer Science[a]	40.63[a]		
Group	Business Management[b]	37.45[b]	3.221	0.043*
	Secretarial Science	39.59		
	Computer Science[b]	42.31[b]		
Individual	Business Management	30.36	1.239	0.293
	Secretarial Science	29.32		
	Computer Science	28.52		

Note: * Significant at p = 0.05 level

In order to determine whether the differences in perceptual learning styles of the respondents from the three fields of study were statistically significant, one way analysis of variance (ANOVA) was carried out, with field of study as the

independent variable and perceptual learning styles as the dependent variable. The results of this test are shown in Table 4.9.

There was significant difference among the respondents for tactile and group learning styles. Scheffe test of multiple comparison was conducted in both these cases. The results shows that there is significant difference between the Secretarial Science respondents and the Computer Science respondents ($F = 4.168$, $p < 0.05$) in their preference for the tactile learning style. The Computer Science respondents had a significantly higher preference for tactile learning style (mean = 40.63) compared to the Secretarial Science respondents (mean = 35.83). This again is consistent with the findings of Reid's (1987) study. Reid found that field of study or subject matter can have influence on learning style preferences. The fact that the Computer Science respondents have higher preference for tactile learning style compared to secretarial science respondents is consistent with the nature of the courses. Computer Science students would be required to be involved in more hands on-activities.

There was also significant difference between the Business Management respondents and the Computer Science respondents in their preference for the group learning style ($F = 3.221$, $p = <0.05$). The Computer Science respondents had a significantly higher preference for group learning style (mean = 42.31) compared to the Business Management respondents (mean = 39.59). Discussion with the lecturers teaching these two courses suggests that the difference in the

learning style preferences of the students taking Business Management and Computer Science could be related to the nature of the two courses and the teaching styles. The contents of the Business Management course as well as the methodology used in teaching the course favour individual learning style. In the case of the Computer Science course, the students are required to work on projects where they have to apply the skills that they have learned. In most cases these projects have to be carried out as group work. As a result, the students would by nature of the work they have to do, favour group learning style.

Research Question 3:
What are the ESL Learning Strategies Used by These Students?

This section discusses the distribution of the respondents according to the levels of use of the different learning strategies and the frequency of use of the different strategies. In order to determine the level of use of the different strategies, when the percentage of respondents falling into a particular learning strategy category exceeds 50 percent, the respondents are treated as belonging to that category for the particular learning strategy.

Levels of Use of the Learning Strategies by the Respondents

When we look at the percentage of respondents using the different learning strategies (Table 4.10), we find the respondents are using both direct (memory, cognitive and compensation strategies) and indirect (metacognitive, affective and social strategies) strategies. This is a good sign. According to

Oxford (1987), new learners and those who are not proficient in the language use only direct strategies. Thus, these learners are dependent on the teachers for the management of the learning situation. Whereas, when learners use both the strategies (direct and indirect), as was the case in this study, it is an indication that learners are able to manage their learning situation. In such a situation, the learners are able to take responsibility for their own learning with the role of the teacher being less directive and more facilitative.

Table 4.10
Percentage of Respondents Using the Different ESL Learning Strategies

Learning Strategy	High	Medium	Low
Memory	32.1	57.7	10.2
Cognitive	43.1	55.5	1.5
Compensation	51.8	43.8	4.4
Metacognitive	63.5	34.3	2.2
Affective	38.7	54.7	6.6
Social	56.9	38.7	4.4

From Table 4.10, it can be seen that more than half of the respondents are high level users of the compensation (51.8 percent), metacognitive (63.5 percent) and social (56.9 percent) learning strategies (this means that they always or almost always use these strategies). Of these three categories of strategies, two of them are from the indirect class. The metacognitive strategies showed the highest percentage. This is in contrast to the findings by O'Malley *et. al,* 1985 a and b, who found that cognitive strategies are the most popular learning strategies among language learners. In this study, more than half of the respondents were high level users of metacognitive strategies indicated that the

majority of the respondents are able to coordinate their second language learning process.

According to Oxford (1990a), metacognitive strategies are important for successful language learning. Learners faced with new materials and different teaching approaches can bring focus to their learning by paying attention, linking with already known materials and by focussing on listening. They are also able to plan their learning by organising, setting goals and objectives and seeking practice opportunities. At a higher level, those using metacognitive strategies are able to carry out self-monitoring and self-evaluation.

This finding is different from that of Chamot *et. al.* (1985), O'Malley *et. al.* (1985a & b). They found that cognitive strategies (example, repetition and note-taking) are used more often than metacognitive strategies and that the most common metacognitive strategies involve planning, with little use of self-monitoring or self-evaluation. They also found that socio-affective strategies are infrequently reported.

The results of the present study also differed from that of Ehrman and Oxford (1988) and Oxford and Nyikos (1989). Ehrman and Oxford (1988), found that adult foreign language learners who need to use the new language for their work, used strategies in searching for and communicating meaning while Oxford and Nyikos (1989), reported heavy use of analytic, formal practice strategies in the university setting, which often stresses discrete point testing and grammar

based instruction. All these different research findings suggest that there is no single common pattern of strategy use across all groups and that a number of important factors influence strategy selection.

In this study, while we know that majority of the respondents are able to use the metacognitive strategies, we need to know at what sub-levels they are functioning. This question arises because of the observation by Oxford (1987) that many students use these strategies without a sense of their importance. In several studies carried out by her on second and foreign language learning, students limited their range of metacognitive strategies to planning strategies with little self-evaluation or self-monitoring. Likewise, university and military foreign language students in Oxford's (1985) studies showed these learners used certain metacognitive strategies like being prepared and using time well but they failed to employ crucial metacognitive strategies like accurately evaluating their progress or seeking practice opportunities.

The social strategies were the second most frequently used learning strategies. According to Oxford (1987), language is a form of social behaviour in that learning a language involves other people. Therefore, appropriate social strategies are very important in this process. High level use of the social strategies indicates that the learners may be using any one or all the three strategies of asking questions for clarification or correction, cooperating with others (either with peers or those who are more proficient users of the language)

and emphathising with others (developing cultural understanding and / or becoming aware of others' thoughts and feelings). Analysis of the questionnaire items pertaining to the social strategies (see Table 4.16) shows that while a high percentage of the respondents used asking questions and cooperating with others, only very few indicated that they used the strategy that involves empathising with others.

As mentioned earlier, compensation strategies were the third most frequently used strategies by the respondents. High level use of compensation strategies is again indicative of good language learners. According to Oxford (1987), compensation strategies are used by good language learners to make educated guesses when confronted with unknown expressions. They guess by using the immediate context and their own life experiences. According to MacBride *et. al.* (1980), when guessing, meaning is created by the receiver in light of the experience which he or she already possesses.

The respondents were found to be medium level users of the memory (57.7 percent), cognitive (55.5 percent) and affective (54.7 percent) learning strategies. This means that they use these strategies sometimes. Memory strategies involve arranging things in order, making associations and reviewing. These strategies involve understanding the meanings of words and being able to form mental linkages. In learning languages, the arrangement and associations

must be personally meaningful to the learner and the materials reviewed must have significance (Oxford, 1990a).

The respondents in this study are learning the English language so that they will be able to understand their professional courses which are conducted in English. Therefore, there is a possibility that the vocabulary used in the English Language class is not personally meaningful to them because it is not related to their field of study. This may explain why they are medium level users of the memory strategies. The same reason may explain why the respondents are medium level users of the cognitive strategies. The cognitive strategies involve practicing, receiving and sending messages, analysing and reasoning and creating structure for input and output. Again, if the words that they are manipulating with in their English Language classes do not relate to their field of study, they may not be using these strategies at a high level.

A discrepancy seems to exist between the finding that the respondents are medium level users of the cognitive strategies (which involve analyzing and reasoning) and the finding that they are high level users of metacognitive and compensation strategies. Some of the strategies in the metacognitive (especially self-monitoring and self-evaluation) and compensation strategies require reasoning. There could be two possible explanations for these differences. The first possibility is that their level of use of the cognitive strategies could be medium bordering on high. The second possibility is that they may be using

strategies in the metacognitive and compensation strategies that do not require reasoning. They could be using the metacognitive strategies for only centering their learning and arranging and planning their learning, both of which do not require much reasoning. Similarly, in the compensation strategies, they may be blindly guessing rather than using linguistic cues.

The affective strategies are one of the indirect strategies that support language learning. The sub-strategies involved in the affective strategies are lowering anxiety (through using progressive relaxation, deep breathing or meditation, using music, using laughter), encouraging yourself (through making positive statements, taking risks wisely and rewarding yourself) and taking your emotional temperature (by listening to your body, using a checklist, writing a language learning diary and discussing your feelings with someone else (Oxford, 1987). Many of these sub-strategies may be contrary to the culture of the respondents. In addition, if we go by the premise that students practise what they are taught (with the exception of may be using music, a checklist and writing a language learning diary), and that most of these strategies are rarely used by language teachers in the classroom, may explain why these respondents were medium level users of the affective strategies.

Distribution of Respondents According to Their
Use of the Different Strategies

Tables 4.11 to 4.17 show the response of the respondents to the different items in the six strategy components of the SILL.

Table 4.11
Responses of Respondents to the Different Items in Memory Strategies

No.	Items	Percentage
1	I think of relationships between what I already know and the new things I learn in English	61.3
2	I use new English words in a sentence so I can remember them	40.3
3	I connect the sound of a new English word and an image or picture of the word to help me	47.4
4	I remember a new English word by making a mental picture of a situation in which the word might be used	45.9
5	I use rhymes to remember new words	21.9
6	I use flash cards to remember new English word	24.1
7	I physically act out new words	28.4
8	I often review English lessons	30.6
9	I remember new English words or phrases by remembering their location on the page on the board or on a street sign	52.5

Since the analysis of the strategy use according to the six groups does not reveal the different sub-strategies the respondents use, a more detailed analysis was carried out to determine the frequency of use of the different sub-strategies in each group by the respondents. When discussing the sub-strategies used by the respondents for each of the strategies, the two or three of the most frequently used strategies (as indicated by their percentages) are discussed in each case. However, in certain cases, very low level use of particular strategies are also highlighted.

Table 4.11 shows the responses of the learners to the different items in the memory strategy group of the SILL. The results show that only two items have a percentage of over 50 percent. Both these items are operationalisation of

the constructs of grouping, associating/elaborating and placing new words into a context. These three learning activities are part of the creating mental linkage which is a sub-strategy of the memory strategies (Oxford, 1990). Therefore, the main memory sub-strategy used by the majority of the respondents is creating mental linkages.

Table 4.12
Responses of Respondents to the Different Items in Cognitive Strategies

No.	Items	Percentage
1.	I say or write new English words several times	38.7
2.	I try to talk like a native English Speaker	38.0
3.	I practice the sounds of English	56.9
4.	I use the English words I know in different ways	39.4
5.	I start conversation in English	27.8
6.	I watch English language TV shows spoken in English or go to the movies spoken in English	86.1
7.	I read for pleasure in English	58.4
8.	I write notes, messages, letters or reports in English	33.6
9.	I first skim an English passage(read over the passage quickly) then go back to new words in English	76.0
10.	I look for words in my own language that are similar to new words in English	46.7
11.	I try to find patterns in English	32.1
12.	I find the meaning of an English word by dividing it into parts that I understand	42.6
13.	I try not to translate word-for-word	56.2
14.	I make summaries of information that I hear or read in English	32.9

Table 4.12 shows the responses of the respondents to the different items measuring their use of the cognitive strategies. Two of the items seem to have been selected by a large percentage of respondents. The item which showed the highest percentage of respondents (86.1percent) is, " *I watch English language*

TV shows spoken in English or go to the movies spoken in English". This item refers to the use of practicing strategy. The second item with high percentage of responses (76.0percent) are, " *I first skim an English passage* (read over the passage quickly) *then go back to new words in English*". This item refers to the use of receiving and sending message strategy. Therefore, the two main cognitive strategies used by the respondents are practising and receiving and sending messages. In the case of watching television although, the strategy falls under the practicing naturalistically category, the learner's role is more passive rather than active.

The responses of the respondents to practice strategies that involve active participation in conversation and initiating conversation (for example "*I start conversation in English*" (27.8 percent), "*I try to talk like a native English Speaker*" *(38.0 percent)*, "*I use the English words I know in different ways* " (39.4 percent) and "*I try to find patterns in English* " (32.1 percent) was found to be low. This suggests that the students are less interested in communicative competence. According to Oxford and Nyikos (1989), less popular use of functional practice (authentic language use) strategies which requires a greater personal investment in target culture and demanded more extracurricular effort in finding naturalistic practice situations, is indicative of instrumental motivation for language learning.

The results also show that the use higher level cognitive strategies such as analyzing and reasoning (for example "*I find the meaning of an English word*

by dividing it into parts that I understand' (42.6 percent)) and creating structure for input and output (for example "*I make summaries of information that I hear or read in English*" (32.9 percent) is low as reflected by the percentage of respondents selecting items relating to these strategies.

Table 4.13
Responses of Respondents to the Different Items in Compensation Strategies

No.	Item	Percentage
1.	To understand unfamiliar word, I make guesses	68.6
2.	When I can't think of a word during a conversation in English, I use gestures.	64.9
3.	I make up new words if I do not know the right ones in English	40.1
4.	I read English without looking up every new word.	22.6
5.	I try to guess what the other person will say next in English	40.2
6.	If I can't think of an English word, I use a word or phrase that means the same thing	78.1

Table 4.13 shows the responses of the respondents to the different items in the compensation strategies. Three items in the compensation strategies had responses of over 60 percent. The item with the highest percentage (78.1 percent), "*If I can't think of an English word, I use a word or phrase that means the same thing*" refers to overcoming limitations in speaking and writing using synonyms. The second item, "*To understand unfamiliar word, I make guesses*" which has a percentage of 68.6 percent also relates to overcoming limitations in speaking and writing. In this case, it involves adjusting or approximating the message. The third item, "*When I can't think of a word during a conversation in*

English, I use gestures", has the second highest percentage (64.9percent) and also falls under the strategy of overcoming limitations in speaking and writing. This is done through the use of mime or gestures. From the analysis of the respondents' use of compensation strategies it can be seen that they are able to use higher level compensation strategies.

Table 4.14
Responses of Respondents to the Different Items in Metacognitive Strategies

No.	Item	Percentage
1.	I try to find as many ways as I can to use my English	67.2
2.	I notice my English mistakes and use that information to help me do better.	81.8
3.	I pay attention when someone is speaking English	84.7
4.	I try to find out how to be a better learner of English	83.9
5.	I plan my schedule so I will have enough time to study English	14.6
6.	I look for people I can talk to in English	54.8
7.	I look for opportunities to read as much as possible in English	43.3
8.	I have clear goals for improving my English skills	42.3
8.	I think about my progress in learning English	59.1

Table 4.14 shows the responses of the respondents to items measuring the use of metacognitive strategies. Three items obtained a response of over 80 percent. They are "*I pay attention when someone is speaking English*" (84.9percent) (centering your learning), "*I try to find out how to be a better learner of English*" (83.9percent) (arranging and planning your learning) and "*I*

notice my English mistakes and use that information to help me do better" (81.8percent) (evaluating your learning). This shows that the students are using all three sub-categories of metacognitive strategies, that is, centering their learning, arranging and planning their learning as well as evaluating their learning.

Table 4.15
Responses of Respondents to the Different Items in Affective Strategies

No.	Item	Percentage
1.	I try to relax whenever I feel afraid of using English	65.4
2.	I encourage myself to speak English when I am afraid of making a mistake	60.0
3.	I give myself a reward or treat when I do well in English	44.6
4.	I notice if I am tense when I am studying or using English	43.0
5.	I write down my feelings in a language learning diary	21.2
6.	I talk to someone else about how I feel when I am learning English	35.0

Table 4.15 shows the responses of the respondents to items measuring the use of affective strategies. There were two items measuring affective strategies that had responses of 60 percent and above. They are, *"I try to relax whenever I feel afraid of using English"* (65.4 percent) and "*I encourage myself to speak English when I am afraid of making a mistake*" (60percent). The former refers to the use of strategies for lowering anxiety while the latter refers to strategies for encouraging oneself (Oxford, 1987). For lowering anxiety, the students use

progressive relaxation while in the case of encouraging oneself they use the strategy that involves making positive statements (Oxford, 1987).

Table 4.16 shows two items measuring the use of social strategies, "*If I do not understand something in English, I ask the other person to slow down or say it again*" (78.1percent) (asking for clarification and verification) and "*I practise English with other students*" (75.2percent) (cooperating with proficient users of the new language) having percentage responses of over seventy percent. The former falls under the asking questions category while the latter falls under the cooperating with others category (Oxford, 1987).

Table 4.16
Responses of Respondents to the Different Items in Social Strategies

No.	Item	Percentage
1.	If I do not understand something in English, I ask the other person to slow down or say it again	78.1
2.	I ask English speakers to correct me when I talk	51.8
3.	I practice English with other students	75.2
4.	I ask for help from English speakers	52.6
5.	I ask questions in English	35.8
6.	I try to learn about the culture of English speakers	27.0

Here again, we find that the responses to the item pertaining to culture "*I try to learn about the culture of English speakers*" (developing cultural understanding) shows an extremely low percentage (27percent). This again

indicates that the motivation for learning the English Language for these students is instrumental rather than integrative.

Table 4.17 shows the ten items relating to the most frequently used language learning strategies of the respondents. If we disregard the first item, "*I watch English language TV shows spoken in English or go to the movies spoken in English*" (the reason for this may be entertainment rather than educational), we find that the metacognitive strategies head the top three positions in the list. If we include the item in the tenth position *(I try to find as many ways as I can to use my English*), the metacognitive strategies seem to be the most frequently used ESL learning strategies of the respondents. If we look at the type of metacognitive strategies they use, we find they use all three major categories, that is, centering learning, arranging as well as planning learning and evaluating learning.

Table 4.17
Responses of the Respondents in Order of Frequency of Use of the Different Strategies

No.	Items	Strategies	Percentage
1.	I watch English language TV shows spoken in English or go to the movies spoken in English	Cognitive	86.1
2.	I pay attention when someone is speaking English	Metacognitive	84.7
3.	I try to find out how to be a better learner of English	Metacognitive	83.9

Table 4.17
Responses of the Respondents in Order of Frequency of Use of the Different Strategies (cont.)

No.	Items	Strategies	Percentage
4.	I notice my English mistakes and use that information to help me do better.	Metacognitive	81.8
5.	If I can't think of an English word, I use a word or phrase that means the same thing	Compensation	78.1
6.	If I do not understand something in English, I ask the other person to slow down or say it again	Social	78.1
7.	I first skim an English passage(read over the passage quickly) then go back to new words in English	Cognitive	76.0
8.	I practice English with other students	Social	75.2
9.	To understand unfamiliar word, I make guesses	Compensation	68.6
10.	I try to find as many ways as I can to use my English	Metacognitive	67.2

The social, compensation and cognitive strategies also appeared among the more frequently used strategies. Two strategies that is the memory strategies and affective strategies did not find a place in this list indicating that they are less frequently used by the respondents when compared to metacognitive, social, compensation and cognitive strategies.

Research Question 4:
Is there a Relationship between Personal Variables of These Students and Their ESL Learning Strategies?

Statistical tests were carried out to determine whether there was significant relationship between personal variables of the students in terms of

age, number of years of studying the English language, language proficiency, gender, field of study and learning strategies.

Age of Respondents and Learning Strategies

Pearson product moment correlation was carried out to determine whether there was a significant relationship between the age of the students and their use of learning strategies.

Table 4.18
Relationship between Age and Learning Strategies

Learning Strategies	r	p
Memory	-0.221	0.009*
Cognitive	0.000	0.997
Compensation	0.084	0.329
Metacognitive	0.049	0.567
Affective	-0.174	0.042*
Social	-0.108	0.211

* Significant at p = 0.05 level

The result in Table 4.18 shows age correlates negatively with memory ($r = -0.221$, $p < 0.05$) and affective ($r = -0.174$, $p < 0.05$) learning strategies. This means that the older the students, the less they are likely to use the memory and affective strategies. Memory strategies reflect very simple principles, such as arranging things in order, making associations, and reviewing. These principles all involve meaning. Affective strategies are concerned with managing emotions. The affective strategies involve lowering your anxiety, encouraging yourself and taking your emotional temperature (Oxford, 1987). The results suggest that mature learners have less use for these strategies. Studies carried out by

Ehrman and Oxford (1989) and Oxford (1986) on adult learners showed that they used more sophisticated learning strategies than did younger learners. The differences according to them could be attributed to the difference in motivational levels of the two groups. The adults were probably learning for immediate career purposes.

Number of Years of Learning English and Learning Strategies

Pearson product moment correlation was carried out to determine the relationship between number of years of studying English language and the use of learning strategies. The result in Table 4.19 shows that there is positive correlation between number of years of learning English language and metacognitive strategies ($r = 0.173$, $p < 0.05$).

Table 4.19
Years of Learning English Language with Learning Strategies

Learning Strategies	r	p
Memory	0.014	0.871
Cognitive	0.105	0.222
Compensation	0.037	0.670
Metacognitive	0.173	0.043*
Affective	0.039	0.654
Social	0.055	0.522

Note: * Significant at p = 0.05 level

Metacognitive strategies are one of the indirect learning strategies. The three main processes involved in the metacognitive strategies are centering your learning, arranging and planning your learning and evaluating your learning (Oxford, 1987). The significant relationship between number of years of learning

the English language and the use of metacognitive strategies indicates that the students who have spent longer time learning the English language are better able to plan and manage their learning. They are also more likely to use self-assessment and self-evaluation strategies while learning the language.

This positive significant relationship between duration of study and choice of language learning strategy concurs with that of Politzer (1983) and Chamot *et. al.* (1987). Politzer (1983) found that students who have been studying foreign language for a longer duration used more effective strategies. Chamot *et. al.* (1987) found that cognitive strategy use decreased and metacognitive strategy use increased with duration of study.

Language Proficiency and Learning Strategies

The grades obtained by the respondents in their Foundation English Language Examination was used as a measure of language proficiency. Since this is an ordinal data, Spearman's rank order correlation was used to determine the relationship between language proficiency of the students and their use of learning strategies. The results in Table 4.20 show that there is no significant correlation between language proficiency of the respondents and the learning strategies they use in ESL learning. Table 4.20 also shows that the relationship between language proficiency and memory strategies is negative.

Table 4.20
Language Proficiency and Learning Strategies

Learning Strategies	Spearman's Rho(ρ)	p
Memory	-0.076	0.377
Cognitive	0.119	0.166
Compensation	0.148	0.085
Metacognitive	0.102	0.237
Affective	0.027	0.753
Social	0.038	0.661

Note: * Significant at p = 0.05 level

Although the relationship was found to be not significant statistically, there is a suggestion that the more proficient ESL students are less likely to use memory strategies. This is in agreement with the findings of Tyacke and Mendelsohn (1986) that more advanced learners reduced their use of less helpful or less relevant strategies and geared their strategy use more directly to the language task in hand.

Learning Strategies by Gender

A t-test was carried out to determine whether there were significant differences in the learning strategies used by male and female students. The results on Table 4.21 show that the female students used the metacognitive learning strategies significantly more often that their male counterparts ($t = -2.813$, $p < 0.05$). The mean value for female students was 3.80 while that of the male students was 3.48. This indicates that female students are more likely to plan, arrange and evaluate their learning compared to the male students. The finding by Ehrman and Oxford (1989) that female students used more self-management strategies compared to male students seems to be in agreement

with the findings of this research where female students used metacognitive strategies significantly more often than male students.

Another interesting aspect of this difference is about another of the metacognitive strategies, that is, centering learning. This component includes paying attention and listening before speaking. These strategies would be favoured by learners with auditory learning styles. Earlier, the female students were found to have significantly higher preference for auditory learning styles compared to male students (see Table 4.7). Therefore the significantly higher use of the metacognitive strategies by female students could also be tied up with the fact that they have a greater preference for auditory learning styles.

Table 4.21
T-Test for Learning Strategies by Gender

Learning Strategies	Gender	N	Mean	S.D.	t-value	df	p
Memory	Male	31	3.06	0.66	-1.760	135	0.081
	Female	106	3.26	0.54			
Cognitive	Male	31	3.30	0.50	-1.879	135	0.062
	Female	106	3.48	0.46			
Compensation	Male	31	3.38	0.60	-1.056	135	0.293
	Female	106	3.51	0.61			
Metacognitive	Male	31	3.48	0.66	-2.813	135	0.006*
	Female	106	3.80	0.53			
Affective	Male	31	3.17	0.67	-1.225	135	0.223
	Female	106	3.32	0.58			
Social	Male	31	3.50	0.68	-0.717	135	0.474
	Female	106	3.60	0.69			

Note: * Significant at p = 0.05 level

The findings are supported by the research by Shipman and Shipman (1985) and Belenky, Clinchy, Goldberge, and Tarule (1986), who found female students to be more reflective while male students to be more impulsive.

Learning Strategies by Field of Study

Oneway ANOVA was carried out to determine whether there was significant difference in the learning strategies used by students from different fields of study. The results on Table 4.22 shows that Business Management students used the cognitive learning strategies more often than Secretarial Science students ($F = 5.121$, $p < 0.05$). The mean for cognitive learning strategies for Business Management students was 3.612 while that for Secretarial Science students was 3.297.

Table 4.22
One-way ANOVA to Compare the Learning Strategies by Field of Study

Learning Style Preference	Field of Study	Mean	F value	P
Memory	Business Management	3.296	3.407	0.036
	Secretarial Science	3.027		
	Computer Science	3.302		
Cognitive	Business Management[a]	3.612	5.121	0.007*
	Secretarial Science[a]	3.297		
	Computer Science	3.403		
Compensation	Business Management	3.631	2.358	0.098
	Secretarial Science	3.475		
	Computer Science	3.361		
Metacognitive	Business Management	3.857	1.961	0.145
	Secretarial Science	3.612		
	Computer Science	3.707		
Affective	Business Management	3.377	0.981	0.378
	Secretarial Science	3.191		
	Computer Science	3.280		
Social	Business Management	3.662	1.861	0.160
	Secretarial Science	3.4.6		
	Computer Science	3.642		

Note: a - Significant difference between these groups at p = 0.05 level

This is in keeping with the findings by Reid (1987), who discovered that the students' fields of study do influence the learning strategies used by them. In addition to Reid (1987) other researchers like Politzer and McGroarty (1985) found that field of specialization was associated with the strategy choice of ESL students. Likewise, Oxford and Nyikos (1989) discovered that students' university major influenced strategy use.

Research Question 5:
Is there a Relationship between the Perceptual Learning Styles of These Students and Their ESL Learning Strategies?

Pearson product moment correlation was used to determine whether there was significant relationship between perceptual learning styles of the respondents and the strategies they use for ESL learning. The results show that there were several statistically significant positive correlation between perceptual learning styles and the choice of ESL learning strategies (Table 4.23)

Table 4.23
Perceptual Learning Styles and the ESL Learning Strategies

Learning Styles	Learning Strategies					
	Memory	Cognitive	Compensatory	Metacognitive	Affective	Social
Visual	0.240*	0.098	-0.089	-0.027	0.001	0.068
Auditory	0.302*	0.327*	0.024	0.032	0.036	0.235*
Kinesthetic	0.206*	0.143	0.035	-0.016	0.032	0.231*
Tactile	0.232*	0.155	0.101	0.058	0.060	0.207*
Group	-0.005	0.049	0.094	-0.143	0.054	0.072
Individual	0.223*	0.163	0.040	0.204*	-0.024	0.073

* Significant at p = 0.05 level

There was significant positive correlation for the memory strategies with visual ($r = 0.240$; $p < 0.05$), auditory ($r = 0.302$; $p<0.05$), kinesthetic ($r = 0.206$; $p < 0.05$), tactile ($r= 0.232$; $p<0.05$) and individual ($r = 0.223$; $p < 0.05$) learning styles. The memory strategies involve processes like creating mental images (visual), applying images and sounds (visual and auditory), receiving well and employing action (tactile and kinesthetic) (Oxford, 1987). The processes involved in applying action include using physical response or sensation (kinesthetic) and using mechanical techniques (tactile) (Oxford, 1987). Considering the processes involved in the memory strategies, it is not surprising to find that those who rated themselves as having major preferences for visual, auditory, kinesthetic and tactile learning style would have a preference for the memory strategies. Since several of these processes like creating mental images and applying images and sounds are very individualised, this explains the correlation between individual leaning style and memory strategies.

There was significant positive correlation between auditory learning style and cognitive learning strategies ($r = 0.327$; $p <0.05$). The cognitive strategies with processes like repeating and practicing with sound, recognising and using formulas and patterns (example, "Hello, how are you?" and "It is time to . . ."), recombining (combining known elements in a new ways when speaking) and practising naturalistically (participating in a conversation, listening to lectures) would make it the natural choice of those with major preference for the auditory learning style (Oxford, 1990a). The cognitive strategies also include practicing

writing systems and taking notes. This suggests that cognitive strategies might be selected by those who have major preferences for visual and tactile learning styles. However, this was not the case in this study. The cognitive learning strategies also incorporate reasoning. In this study the cognitive strategies were used at medium level by the respondents. This could be the reason for the absence of correlation between cognitive strategies and perceptual learning style preferences other than auditory learning style.

Table 4.23 also shows that there is significant positive correlation for social learning strategies with auditory ($r = 0.235$; $p < 0.05$), kinesthetic ($r = 0.231$; $p < 0.05$) and tactile ($r = 0.207$; $p < 0.05$) learning styles. This is an expected outcome. In the Malaysian educational setting, the focus of the ESL is essentially for communication (KBSM curriculum, 1988). In fact both the primary and secondary school English Language curriculum places emphasis on communication. Communication is a form of social behaviour. Therefore, learning a language for communication involves using appropriate social learning strategies. The learning styles that would complement social learning strategies would be auditory, kinesthetic and tactile.

There was significant positive correlation between the individual learning style and the metacognitive strategies. If we look at the metacognitive strategies, that is, centering learning, arranging as well as planning learning and evaluating learning, all of which deal with how an individual plans and manages his or her

learning. This explains the relationship between individual learning style and metacognitive learning strategies.

Although many researchers have carried out studies to determine the perceptual learning style preferences or learning strategies of students in Malaysia, no known research has been carried out to determine the relationship between perceptual learning style preferences and learning strategies of malay ESL university students. Rossi-Le (1989) carried out a study in America on the relationship between perceptual learning style preferences and learning strategies and found that an individual's learning style preferences influenced the type of learning strategies he or she will employ in acquiring a second language. Studies by Ehrman and Oxford (1989) also found that learning styles as determined by Myers Briggs Type Indicator (MBTI) (Myers and Briggs, 1987) significantly influenced strategy choice. However, these two studies were carried out abroad. Thus, it seemed appropriate to look into this aspect in the Malaysian context.

Summary of the Findings

The purpose of this study is to determine the perceptual learning style preferences of selected Malay ESL students in an institution of higher learning in Malaysia and the relationship between their learning styles and learning strategies. The study also tested the hypothetical model (Figure 3.1) that certain personal variables of the respondents such as culture, age, years of learning the

language, language proficiency, gender and field of study influenced their learning style preferences which in turn influenced their learning strategies for ESL learning. More specifically this chapter discusses the findings in relation to research questions 1 to 5.

There were a total of 137 respondents. The female students outnumbered the male students by a ratio of nearly 4 : 1. This reflects the current trend in all public institutions of higher learning in Malaysia where there are more female students compared to male students. Generally the respondents had a very positive attitude towards learning ESL. Majority of the students however reported that they were not interested in the culture associated with the English language.

The study showed that Malay ESL students had a major preference for auditory, kinesthetic, tactile and group learning styles and a minor preference for visual and individual learning styles. This finding differed from the results of Reid's (1987) study of Malay students in America. According to her study, Malays have major preferences for kinesthetic and tactile learning styles and minor preferences for visual, auditory, group and individual learning styles. Since Reid's (1987) study was carried out in America there is a possibility that the host culture may have influenced the learning style preference of her respondents.

The female respondents were found to have a significantly higher preference for auditory learning style compared to the male students. Field of

study or subject matter was found to have a significant influence on the learning style preferences of the students. Age of learner, years of studying the language and language proficiency were also found to have significant influence on learning style preferences. Age and years of learning the language were found to correlate negatively with kinesthetic and tactile learning styles. Number of years of learning the English language and language proficiency were found to have negative correlation with group learning style and positive correlation with individual learning style. The implication is that as the students become more proficient in the language they are able to control and manage their own learning.

In terms of the learning strategies, the respondents were found to be high level users of compensation, metacognitive and social strategies with metacognitive strategies being most frequently used. They were medium level users of the memory, cognitive and affective strategies. They were therefore able to use both direct and indirect strategies. The implication is that they were not only able to work with the language but were able to manage and control their learning situations.

Age of respondents was found to correlate negatively with memory and affective strategies. Number of years of learning the language was found to correlate positively with metacognitive strategies. This shows that those who have been studying the language longer are more likely to set goals, plan and

arrange their learning as well as evaluate their learning. Female students used the metacognitive strategies significantly more often than male students.

There was significant positive correlation for memory strategies with visual, auditory, kinesthetic, tactile and individual learning styles. The auditory learning style correlated significantly with cognitive learning strategies. The individual learning style correlated with metacognitive strategies. The auditory, kinesthetic and tactile learning styles correlated with the social learning strategies. Comparison of the perceptual learning styles of the students and their learning strategies imply that the students are able to some extent select strategies that are appropriate to their learning styles.

The findings of the study support the hypothesised model to some extent. Personal variables do influence the perceptual learning styles of the students. Some of the perceptual learning styles are related to the learning strategies.

This chapter covers the perceptual learning style preferences and the learning strategies of the students as a group. The study used the survey method and therefore the results represent the general characteristics of the respondents with reference to perceptual learning style preferences and learning strategies. The students respond to the questionnaire without specific reference to any particular language skills. In addition, no analysis was carried out to determine how variables like the home environment, teachers' teaching styles

and other environmental factors influence the perceptual learning style preferences and learning strategies of the students. Thus, in order to determine the possible influence of learning tasks and other variables mentioned above, an in-depth study of three cases was carried out. These case studies look at how three students with different perceptual learning style preferences select their learning strategies for a reading comprehension task. A detailed description of the case studies is given in chapter five.