

CHAPTER 4

RESULTS AND DISCUSSION

4.0 Introduction

It is the purpose of this study to investigate the gender differences in learning style preferences and strategies of secondary male and female subjects. This chapter presents the findings of the data analysis three sets of questionnaires that were administered to ninety (90) Form 2 subjects to ascertain the most and least preferred learning styles and learning strategies between male and female subjects. Findings from Questionnaire 2 and 3 will also be compared to find whether there are any similarities or differences in terms of the learning style preferences and strategies based on gender differences.

It will first present the subjects' profile to be followed by the findings of the Perceptual Learning Style Preference (PLSP) questionnaire and the Strategy Inventory for Language Learning (SILL) questionnaire. A frequency count is used to analyse the data and will be tabulated.

4.1 Profile of Subjects

Subjects of this study consisted of ninety (90) Form Two subjects from a secondary school located in Puchong, Selangor. This particular school is listed as an urban school with a subject population of 1,300 subjects. Each class in the school consists of an average of 35 students. For this study, three Form Two classes were chosen namely 2A, 2B and 2C.

These classes were selected for their English language proficiency is relatively good. This is to ensure that they could understand the questions, thus provide the best response to the questionnaire.

30 subjects from each class were selected at random with an equal number of the male and female subjects to ensure consistency when comparing their preferences. Table 4.1 shows the breakdown of the male and female subjects according to their classes.

Table 4.1: Male and Female Subjects

	Male Subjects	Female Subjects	Total
2 A	15	15	30
2 B	15	15	30
2 C	15	15	30
TOTAL	45 (50%)	45(50%)	90 (100%)

There were an equal number of male and female subjects from these three classes. Each class comprised of 15 male subjects and 15 female subjects which all totalled up to 90 subjects.

4.2 Subjects' Perception on the Importance of English Skills

This section discusses the findings from Questionnaire 1. The results are presented in Table 4.1 in the following section.

4.2.1 The Importance of the English Skills

The subjects were asked to rate their perceptions on the importance of each of the four English language skills presented in Table 4.2.

Table 4.2: The Importance of the English Skills

Scale	Listening Skills % (n)		Speaking Skills % (n)		Reading Skills % (n)		Writing Skills % (n)	
	M	F	M	F	M	F	M	F
Very Important	48.9 (44)	55.6 (50)	57.8 (52)	71.1 (64)	60.0 (54)	66.7 (60)	64.4 (58)	73.3 (66)
Important	48.9 (44)	42.2 (38)	40.0 (36)	28.9 (26)	40.0 (36)	33.3 (30)	35.6 (32)	26.7 (24)
Not Important	2.2 (2)	2.2 (2)	2.2 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
Total	100 (90)	100 (90)	100 (90)	100 (90)	100 (90)	100 (90)	100 (90)	100 (90)

Table 4.1 shows that the majority of subjects perceived all four skills as being important. The male subjects chose the writing skill as very important (64.4%), followed by reading skill (60.0%), speaking skills (57.8%) and listening skills (48.9%).

Female subjects similarly also chose writing skills as very important (73.3%). However, the results differed slightly compared to the male subjects as 71.1% female subjects considered speaking skills as the second very important skill. It is followed by reading skills (66.7%) and listening skills (55.6%).

In the results, the percentage in females was higher than males with the highest difference in speaking skills (13.3%). This shows that more female than male subjects place the importance on speaking skills above other skills.

From the findings, the importance of the skills perceived by the subjects is somehow seen to have a tendency to influence their learning style preference and choice of learning strategies.

4.2.2 Enjoy Learning English

For this third and last question in the questionnaire, all 90 subjects (100%) agreed that they enjoy learning English. This result is overwhelming despite there were few subjects who rated themselves as having poor proficiency in English language skills, they still enjoy learning the language. This is a positive response and is very encouraging to teachers and educator to teach the language to the subjects.

4.3 Perceptual Learning Style Preference (PLSP) of Subjects

The preferences on the learning style of the subjects were based on the Perceptual Learning Style Preference (PLSP) questionnaire (see Appendix B) which was developed by Reid (1987).

Reid (1987) pioneered research of the Perceptual Learning Style of ESL subjects in the United States, particularly for learners of foreign language. This self-reporting questionnaire was chosen for this study as it encompasses both sensory and sociological

learning style preference. It is self-scoring, and not scored by an external agent such as the teacher or researcher. The findings from this questionnaire are tabulated and presented in Tables 4.3 to 4.6 in the following section.

4.3.1 Overall Perceptual Learning Style Preference (PLSP) of Subjects

This section focuses on the perceptual learning style preferences of the subjects. Based on the self-scoring results, the distribution of subjects according to major, minor and negligible learning style preferences is shown in Table 4.3.

Table 4.3: Learning Style Preferences of Subjects

	Major Learning Style % (n)	Minor Learning Style % (n)	Negligible % (n)	TOTAL % (n)
Visual	34.4 (31)	61.2 (55)	4.4 (4)	100 (90)
Auditory	75.6 (68)	23.2 (21)	1.1 (1)	100 (90)
Kinaesthetic	78.9 (71)	18.9 (17)	2.2 (2)	100 (90)
Tactile	27.8 (25)	62.2 (56)	10.0 (9)	100 (90)
Group	54.5 (49)	44.4 (40)	1.1 (1)	100 (90)
Individual	18.9 (17)	27.8 (25)	53.3 (48)	100 (90)

From Table 4.3, the highest scores are highlighted. It shows that the majority of the subjects rated themselves as having major preferences for Kinaesthetic learning style 78.9% (n=71). Major preference refers to style or ways the subjects always do in learning. For this learning style, it shows that learners learn best through experience, by being involved physically in classroom experiences. They remember information well when they actively participate in activities, field trips, and role plays in the classroom. A combination of stimuli, for example, an audiotape combined with an activity, help them understand new

material. Example question for this learner would be from statement 2: “I prefer to learn by doing something in the class”.

This is followed by Auditory learning style (75.6%). This refers to learners who prefer to learn from hearing words spoken and from oral explanations. They remember information by reading aloud or by moving their lips as they read, especially when they are learning new materials. Example question for this type of learner would be from statement 1: “When the teacher tells me the instructions I understand better.” They benefit from listening to videotapes and lectures and participating in class discussions. They also benefit from listening to tape, and by conversing with their teacher.

The next group of subjects rated themselves as having minor preferences for Visual (61.2%). Minor preference indicates areas where students can still function well as a learner. Usually, a very successful learner can learn in several different ways, and he / she might want to experiment with ways to practice and strengthen his / her minor learning style. Subjects who fall in this category show a preference to learn from seeing words in books, on the chalkboard and in workbooks. They can remember and understand information and instructions better if they read them. Although this may not be their major preference, they still do not need as much oral explanation as an auditory learner, and can often learn alone with a book. They need to take lecture notes and oral instructions if they want to remember information.

62.2% of subjects were grouped as Tactile learning styles and therefore showed a tendency towards the opportunity to do “hands-on” experiences with materials, which is, working on experiments in a laboratory, handling and building models, and touching and working with

material which could provide them with the most successful learning situations. Writing notes or instructions can help them remember information, and physical involvement in classroom activities may help them understand new information.

Individual learning style is the least preferred by all subjects with only 18.9% (n=17). Individual learning style is for subjects who learn best when they work alone. When it is the least preferred, it shows that these subjects do not like to work alone. They probably dislike the idea of studying alone, and remember information they learn by themselves. They may not understand material when they learn it alone and do not make better progress in learning when they work by themselves.

The preference for Kinaesthetic, Auditory and Group learning styles could also be due to the fact that these are the teaching styles that the subjects have received throughout their English learning experience since primary 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 (Kinaesthetic learning), listening to tape audio (Auditory learning) and group work (Group learning).

4.3.2 Learning Style Preferences of Male Subjects

This section presents the breakdown of the results for learning style preferences of the male subjects. Results are shown in Table 4.4.

Table 4.4: Learning Style Preferences of Male Subjects

	Major Learning Style % (n)	Minor Learning Style % (n)	Negligible % (n)	TOTAL % (n)
Visual	33.3 (15)	60.0 (27)	6.7 (3)	100 (45)
Auditory	71.1 (32)	26.7 (12)	2.2 (1)	100 (45)
Kinaesthetic	82.2 (37)	15.6 (7)	2.2 (1)	100 (45)
Tactile	24.4 (11)	57.8 (26)	17.8 (8)	100 (45)
Group	42.2 (19)	57.8 (26)	0.0 (0)	100 (45)
Individual	15.6 (7)	28.9 (18)	55.5 (25)	100 (45)

The results are based on students' self-scoring Questionnaire 1. Results show that a majority of male subjects have a major learning style in Kinaesthetic. As high as 82.2% (n=37) subjects have categorised themselves as having a major learning style for this. Auditory learning style become second to the preference of male subjects with 71.1% (n=32). The third preference among the male subjects is Visual learning style where it was reported that the subjects have a minor preference for this learning style. In turn, as high as 55.5% (n=25) did not prefer Individual learning style.

4.3.3 Learning Style Preference of Female Subjects

This section presents the breakdown of the results presented in Table 4.5 for learning style preferences of the female subjects.

Table 4.5: Learning Style Preferences of Female Subjects

	Major Learning Style % (n)	Minor Learning Style % (n)	Negligible % (n)	TOTAL % (n)
Visual	35.6(16)	62.2(28)	2.2(1)	100(45)
Auditory	80.0(36)	20.0(9)	0.0(0)	100(45)
Kinaesthetic	75.6(34)	22.2(10)	2.2(1)	100(45)
Tactile	31.1(14)	66.7(30)	2.2(1)	100(45)
Group	66.7(30)	31.1(14)	2.2(1)	100(45)
Individual	22.2(10)	26.7(12)	51.1(23)	100(45)

From Table 4.5, it shows that 80.0% (n=36) subjects preferred Auditory learning style. Kinaesthetic learning style becomes second preferred learning style with 75.6% (n=36). Group learning style becomes the third highest preferred learning style with 66.7% (30) subjects. On the other hand, 51.1% (n=23) subjects did not prefer Individual learning style, similar to the male subjects.

4.3.4 Comparison of Learning Style Preferences

This section discusses the differences of the preferred learning styles of the male and female subjects presented in Tables 4.4 and 4.5, respectively. Comparisons will be presented according to Major, Minor and Negligible learning styles.

Comparison between male and female subjects is shown in Table 4.6.

Table 4.6 Comparison between Male and Female Subjects on Major Learning Style

RATING	Subjects	
	Males % (n)	Females % (n)
1	Kinaesthetic 82.2 (37)	Auditory 80.0 (36)
2	Auditory 71.1 (32)	Kinaesthetic 75.6 (34)
3	Group 42.2 (19)	Group 66.7 (30)
4	Visual 33.3 (15)	Visual 35.6 (16)
5	Tactile 24.4 (11)	Tactile 31.1 (14)
6	Individual 15.6 (7)	Individual 22.2 (10)

Based on Table 4.6, the learning style preference of male and female subjects were similar except for the highest ranked major learning styles. Male subjects showed preference for Kinaesthetic learning style (82.2%) while female subjects rated Auditory (80.0%) as the top ranking learning style. Another significant difference is in the Group learning style category. This learning style reported the biggest difference of 24.5% between the male and

female subjects.

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 subjects were more likely to be Tactile (preferring manipulating objects) and Kinaesthetic (preferring total body movements) compared to female subjects, no such difference was found in this study. The study showed that both male and female subjects had major preferences for Kinaesthetic and Auditory learning styles. The results of this study are similar to the study by Paramjeet (2003) who found male and female subjects had major preferences for Kinaesthetic and Tactile learning styles.

Comparison between male and female subjects can be seen in Table 4.7.

Table 4.7 Comparison between Male and Female Subjects on Minor Learning Style

RATING	Subjects	
	Males % (n)	Females % (n)
1	Visual 60.0 (54)	Tactile 66.7 (60)
2	Tactile 57.8 (52)	Visual 62.2 (56)
3	Group 57.8 (52)	Group 31.1 (28)
4	Individual 28.9 (36)	Individual 26.7 (24)
5	Auditory 26.7 (24)	Kinaesthetic 22.2 (20)
6	Kinaesthetic 15.6 (14)	Auditory 17.8 (16)

From Table 4.7, male and female learning style preferences were similar except for the highest ranked minor learning styles. In minor learning style, male subjects ranked their top preference for Visual learning style (60.0%) and Tactile learning style (57.8%) as their second preference. Female subjects, on the other hand, was the reversed in which, Tactile learning style (66.7%) was ranked first, followed by Visual learning style (62.2%) as their minor learning style. Group and Individual learning styles were ranked third and fourth for both male and female learning style preferences. The same reverse pattern was seen for Auditory and Kinaesthetic learning styles where male subjects ranked Auditory learning style (26.7%) as the fifth and Kinaesthetic learning style (15.6%) the least preferred. Female subjects ranked Kinaesthetic learning style (22.2%) their fifth and Auditory learning style (17.8%) as the least preferred.

Comparison between male and female subjects on negligible learning style is shown in Table 4.8.

Table 4.8 Comparison between Male and Female Subjects on Negligible Learning Style

RATING	Subjects	
	Males % (n)	Females % (n)
1	Individual 55.5 (50)	Individual 51.1(46)
2	Tactile 17.8 (16)	Tactile 2.2 (2)
3	Visual 6.7 (6)	Visual 2.2 (2)
4	Auditory 2.2 (2)	Auditory 2.2 (2)
5	Kinaesthetic 2.2 (2)	Kinaesthetic 2.2 (2)
6	Group 0.0 (0)	Group 2.2 (2)

The significant finding that can be highlighted from Table 4.8 is that more than half of the subjects (male 55.5%; female 51.1%) had a negative preference indicated for Individual learning style. This implies that both genders prefer to work in groups or teams. The next significant finding refers to shown in Tactile learning style where 17.8 % of male subjects were reported to be in the negative learning style as opposed to 2.2% of female subjects. Therefore, male subjects in this study show a tendency not to learn by doing “hand-on” experience with materials. This particular finding is different from many of Reid’s study that reported that male subjects having major learning style in Tactile learning style. As for the rest of learning styles, that is, Tactile, Visual, Auditory, Kinaesthetic and Group, only 2.2% (n=2) of female subjects had negligible preferences for each of the mentioned learning style.

The results from Table 4.8 gave the researcher a relief because the subjects did not show much trouble in their learning styles which could influence their learning process.

The Tables 4.6, 4.7 and 4.8 in this section discussed each major, minor and negligible learning style. The comparisons between the male and female subjects were also discussed. The following section discusses the findings on choice of learning strategies.

4.4 Strategy Inventory for Language Learning (SILL) of Subjects

Subjects' learning strategies were measured using the Strategy Inventory for Language Learning (SILL) (see Appendix C) which was developed by Oxford (1990). This section discusses the distribution of the subjects according to the levels of use of the different learning strategies and the frequency of use of the different strategies.

The strategies in the inventory come under two categories, namely direct and indirect strategies. Direct strategies, which "involve direct learning and use of the subject matter, in this case a new language" are subdivided into three groups: memory strategies, cognitive strategies and compensation strategies. Indirect strategies, which "contribute indirectly but powerfully to learning" (Oxford, 1990: 11-12) are also subdivided into three groups: metacognitive strategies, affective strategies and social strategies. Being able to use both direct and indirect strategies could mean that the subject would successfully grasp the learning process easily.

In order to determine the level of use of the different strategies, when the percentage of subjects falling into a particular learning strategy category exceeds 50 %, the subjects are treated as belonging to that category for the particular learning strategy. The findings from this questionnaire are tabulated and presented in Tables 4.7 to 4.11 in the following sections.

4.4.1 Learning Strategies of Male Subjects

This section presents the learning strategies used by male subjects in this study. The results for learning strategies of male subjects can be seen in Table 4.9.

Table 4.9: Learning Strategies of Male Subjects

Learning Strategies	High Level User % (n)	Medium Level User % (n)	Low Level User % (n)	TOTAL
Memory	26.7 (12)	48.9 (22)	24.4 (11)	100 (45)
Cognitive	37.8 (17)	46.7 (21)	15.5 (7)	100 (45)
Compensation	66.7 (30)	26.7 (12)	6.7 (3)	100 (45)
Metacognitive	71.1 (32)	22.2 (10)	6.7 (3)	100 (45)
Affective	31.1 (14)	42.2 (19)	26.7 (12)	100 (45)
Social	40.0 (18)	48.9 (22)	11.1 (5)	100 (45)

From Table 4.9, it can be seen that the top three learning strategies in the high level user category are Metacognitive (71.1%), Compensation (66.7%) and Social (40.0%). This means that these three strategies are most often used by male subjects when they learn. As medium level users, the table shows that the top three strategies are Memory, Social and Cognitive. As low level user, two strategies that stand out among the male subjects are Affective and Memory.

4.4.2 Learning Strategies of Female Subjects

The results for learning strategies of female subjects can be seen in Table 4.10.

Table 4.10: Learning Strategies of Female Subjects

Learning Strategies	High Level User % (n)	Medium Level User % (n)	Low Level User % (n)	TOTAL
Memory	28.9 (13)	51.1 (23)	20.0 (9)	100 (45)
Cognitive	40.0 (18)	46.7 (21)	13.3 (6)	100 (45)
Compensation	60.0 (27)	31.1 (14)	8.9 (4)	100 (45)
Metacognitive	86.7 (39)	11.1 (5)	2.2 (1)	100 (45)
Affective	28.9 (13)	44.4 (20)	26.7 (12)	100 (45)
Social	68.9 (31)	20.0 (9)	11.1 (5)	100 (45)

From Table 4.10, female subjects were reported to be high level users of Metacognitive strategy with significantly high percentage of 86.7% (n=39). Their second choice were Social strategy with 68.9% (n=31) subjects. Compensation strategy came third with 60.0% (n=27) subjects chose for this strategy. The results here showed that female subjects always use the three mentioned strategies in their learning process. The female subjects were also medium level users of Cognitive and Memory strategies. These results showed that female subjects were able to use both direct and indirect strategies in their learning process. This is a good sign because a student who is able to use both direct and indirect strategies can understand things much easier through the learning process.

4.4.3 Comparison of Learning Strategies between Male and Female Subjects

The differences of the Learning Strategies used by the male and female subjects of high level users can be seen in Table 4.11.

Table 4.11: Comparison of High Level Users between Male and Female Subjects

Strategy Category	Rating	Subjects	
		Males % (n)	Females % (n)
Direct	1	Compensation 66.7 (30)	Compensation 60.0 (27)
	2	Cognitive 37.8 (17)	Cognitive 40.0 (18)
	3	Memory 26.7 (12)	Memory 28.9 (13)
Indirect	1	Metacognitive 71.1 (32)	Metacognitive 86.7 (39)
	2	Social 40.0 (18)	Social 68.9 (31)
	3	Affective 31.1 (14)	Affective 28.9 (13)

The results on Table 4.11 showed that the highest percentage is in Metacognitive learning strategy. Female subjects used the Metacognitive learning strategies significantly more often than their male counterparts. The difference is by 15.6% (n=7). This indicates the female subjects are more likely to plan, arrange and evaluate their learning compared to the male subjects. The findings by Ehrman and Oxford (1989) which found that female subjects used more self-management strategies compared to male subjects are similar with the findings of this research where female subjects used Metacognitive learning strategies significantly more often than male subjects.

There was a difference in the Social learning strategy. More female subjects were found to be high level user of this strategy compared to the male subjects (68.9%). According to Oxford (1987), language is a form of social behaviour in that learning a language involves understanding and communicating with other people. Therefore, using appropriate social strategies are necessary for communication. High level use of the Social learning strategies indicates that the learners may be using any one or all of 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 empathizing with others (developing cultural understanding and / or becoming aware of others' thoughts and feelings).

The differences of the learning strategies used by the male and female subjects of medium level users can be seen in Table 4.12.

Table 4.12: Comparison of Medium Level Users between Male and Female Subjects

Category	Rating	Subjects	
		Males % (n)	Females % (n)
Direct	1	Memory 48.9 (22)	Memory 51.1 (23)
	2	Cognitive 46.7 (21)	Cognitive 46.7 (21)
	3	Compensation 26.7 (12)	Compensation 31.1 (14)
Indirect	1	Social 48.9 (22)	Affective 44.4 (20)
	2	Affective 42.2 (19)	Social 20.0 (9)
	3	Metacognitive 22.2 (10)	Metacognitive 11.1 (5)

From Table 4.12, the subjects were found to be medium users of the Memory, Cognitive and Affective learning strategies. 48.9% (n=22) of the male subjects and 51.1% (n=23) of

the female subjects are medium user of Memory learning strategy. Cognitive learning strategy showed similar percentage of 46.7% (n=21) for both male and female subjects. Affective learning strategy showed 42.2% (n=19) of the male subjects and 44.4% (n=22) of the female subjects are medium user for this learning strategy. This means that they sometimes use these three strategies in their learning. Memory learning 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, 1990).

The differences of the Learning Strategies used by the male and female subjects of low level users can be seen in Table 4.13.

Table 4.13: Comparison of Low Level Users between Male and Female Subjects

Category	Rating	Subjects	
		Males % (n)	Females % (n)
Direct	1	Memory 24.4 (11)	Memory 20.0 (9)
	2	Cognitive 15.5 (7)	Cognitive 13.3 (6)
	3	Compensation 6.7 (3)	Compensation 8.9 (4)
Indirect	1	Affective 26.7 (12)	Affective 26.7 (12)
	2	Social 11.1 (5)	Social 11.1 (5)
	3	Metacognitive 6.7 (3)	Metacognitive 2.2 (1)

From Table 4.13, Affective learning strategy showed the highest percentage from the low level users. There are no significant differences found for the low level users in other

learning strategies. The subjects showed that they were still able to use both direct and indirect strategies although they are the low level users of these strategies.

4.5 Summary of the Findings

The aim of this study was to identify the preferred learning style and strategies of Form 2 male and female subjects of a secondary school. There were a total of 90 subjects with the equal number of male and female subjects. Generally the subjects had a very positive attitude towards learning English subject in school.

The findings from Reid's (1987) The Perceptual Learning Style Preferences questionnaire revealed that both male and female subjects had major preferences for Kinaesthetic and Auditory learning style, minor preferences for Visual and Tactile learning styles and negligible or negative preference towards Individual learning style. Group learning style reported higher percentage of the preference in the female subjects compared to the males.

In terms of the learning strategies, both the male and female subjects were found to be high level users of Compensation and Metacognitive learning strategies. However, there was a difference in the Social Learning Strategy where the female subjects were high level users compared to the male subjects who were medium level users. Both male and female subjects were reported to be medium level users of the Memory, Cognitive and Affective Learning Strategies.

After the findings from Reid's (1987) Perceptual Learning Style Preferences questionnaire and Oxford's (1990) Strategy Inventory for Language Learning were compared, there were

similarities and differences found between the male and female subjects. For learning style preferences, they are similar in many ways. The only difference which can be seen is that female subjects are inclined towards both Group learning style and Social learning strategy. The results mean that female subjects prefer to work and communicate with bigger group while the male subjects were found to differ from their female counterpart.

4.6 Conclusion

This chapter covers the learning style preferences and strategies of the form two male and female subjects. The study used the survey method and therefore the results represent the general characteristic of each gender with reference to perceptual learning style preference and learning strategies. The subjects responded to the questionnaire without specific reference to any particular language skills. In addition, no analysis was carried out to determine how variables like the school environment, teachers' teaching styles and other environmental factors influence the preferred learning style and preference of the subjects.

It was the purpose of this study to only identify male and female subjects' perceptual learning style preferences and strategies and whether there are any similarities or differences from the findings based on gender differences. The implications of the findings and some recommendations and suggestions pertaining to the application of the study will be discussed in the next chapter.