

CHAPTER 4

RESULTS AND DISCUSSION

This chapter presents results of the data analyses and discussion of the results. The results include the following major sections: descriptive statistical analysis results, one-way ANOVA results, Pearson correlation analysis results of in-class and outside-class English learning behaviors, and simple regression analysis results. The simple regression analyses were performed between English learning motivation and in-class English learning behaviors as well as between English learning motivation and outside-class English learning behaviors.

The discussion part includes discussion on vocational high school students' English learning motivation, vocational high school students' English learning behaviors, and relationships between vocational high school students' English learning motivation and English learning behaviors. The discussion on students' English learning behaviors is further divided into in-class and outside-class English learning behaviors and the relationship between the two categories of behaviors. The discussion on the relationships between students' English learning motivation and their English learning behaviors covers the correlation between English learning motivation and in-class as well as that between English learning motivation and outside-class English learning behaviors.

Descriptive Statistical Analysis Results

Descriptive statistical analysis results include those of (1) the participants' basic personal background information, (2) vocational high school students' English learning motivation, (3) vocational high school students' in-class English learning behaviors, (4) vocational high school students' outside-class English learning behaviors, and (5) English learning achievement examinations.

Basic Personal Background Information

A summary of the participants' basic personal information is briefly given as follows (see Appendix I for complete details). With regards to gender, 86% of the participants were male VHS students and 14% female. Most of the participants (97%) have never lived in English-speaking countries. For those who have lived abroad, 2% of them stayed less than one year, 0.5% stayed between one to three years, and only 0.5% stayed more than three years. When it comes to years of learning English, about 49% of the participants have learned English for three to five years, 35% for five to seven years, and only 12% have studied English for more than seven years. When asked about their time of studying English per week, a large majority of the participants (up to 88%) spent little time per week in studying English. In specific, 62% spent less than two hours, 26% spent two to four hours, 9% spent four to six hours, 2% spent six to eight hours, and only 1% spent more than eight hours per week in studying English.

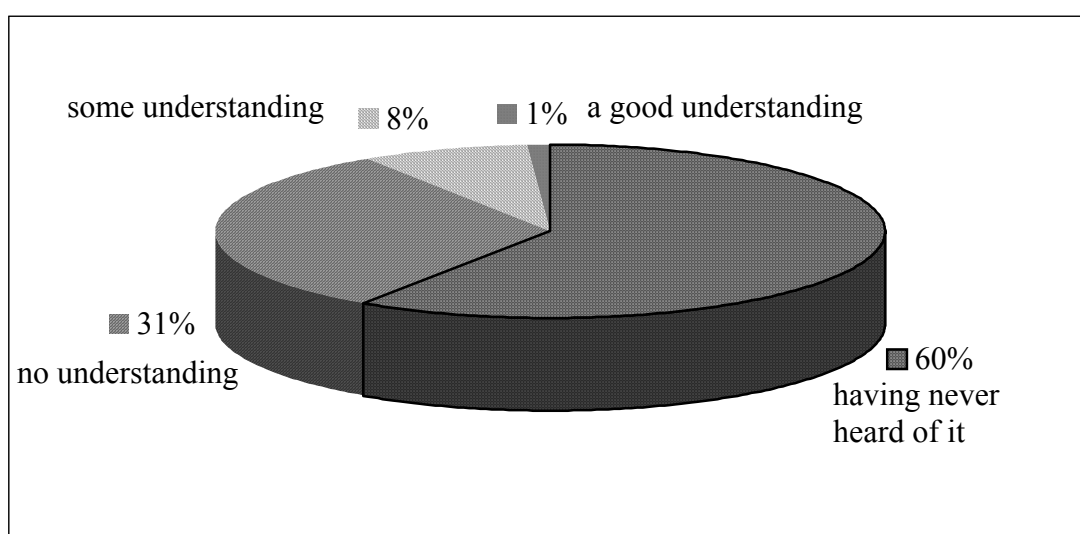


Figure 4.1

Percentage of the Participants' Understanding of the Term "English Learning Strategy"

As to their desired English proficiency, 45% of the participants hoped to have English adequate for future professional needs, 31% hoped to have English as good as English native speakers, 19% hoped to have English adequate for further academic

studies, and 5% to have English adequate for meeting the requirement of their English class at school. When they were asked how much they liked English class, most of the participants (70%) did not show likes or dislikes for English class, while 3% strongly disliked and 4% strongly liked English classes. When inquired if they would take the initiative to improve their English proficiency, only 2% “always,” 6% “often,” 48% “sometimes,” 36% “rarely,” and 8% never tried to improve their English.

At last, when asked about their understanding of the term “English Learning Strategy”, more than half of the participants (60%) have never heard of it, 31% have heard of it but did not understand what it meant. Only 8% of the participants had some understanding of the term and 1% had a good understanding. These data supported the researcher’s previous assumption that most of the students were not familiar with the term “English Learning Strategy”. Therefore, it could justify the researcher’s deliberate use of “English learning behaviors” as variables to set it apart from “English learning strategies,” for it better reflects the real learning situations. In addition, when it comes to responding to the questionnaires, the participants were able to understand the statements more easily by better associating the statements with their own English learning situations, both inside and outside the English class.

English Learning Motivation

The English Learning Motivation Questionnaire, including 24 items adapted from Gardner’s (1985) AMTB, was used to examine the participants’ desire to learn English, motivational intensity, and their attitudes towards learning English. For each of the three underlying motivational constructs, eight 5-point Likert scale items were included and three of them were negative statements. Scoring of the means of all the negative statements was done by assigning points to each of the five Likert scale responses in reverse order.

Table 4.1 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants’ responses to the eight “desire to learn English” items, including Items 1 to 8 in descending order of their means. The three negative

statements are Items 6 to 8. As seen in the table, the internal-consistency reliability coefficient of these items was .81 and their grand mean was 3.17. Among the 8 items, Item 2 had the highest mean (3.95) and the lowest SD (.94). More than two thirds (72%) of the participants expressed that they hope to know more learning skills or ways to facilitate learning English. Item 4 had the lowest mean (1.92) and the lowest SD (.94). Approximately three fourths of the participants (77%) reported that even if there were an English club at school, they would unlikely join it, whereas only 6% would. In addition, Item 7 had the highest SD (1.23). It showed that 66% of the participants would likely take English class even if it were not required for their schoolwork, while 17% of them would not take it.

Table 4.1

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of the Desire to Learn English Items

No	Item Description	1 ^a	2	3	4	5	M	SD
2.	I hope to gain more learning skills or ways to facilitate learning English.	2 ^b	6	20	41	31	3.95	.94
8.	If I do not continue my studies after graduation, I will not continue learning English.	34	38	16	7	5	3.89	1.10
7.	If English class were not a required course, I would not take it.	32	34	17	8	9	3.73	1.23
1.	I like to have many activities for me to practice English in English class.	3	16	40	31	10	3.27	.96
3.	I hope to have more activities outside English class for me to practice English	5	20	36	26	13	3.21	1.07
6.	Even if I had the opportunity to join English-related activities for free, I would not join them.	10	29	31	17	13	3.07	1.17
5.	I look forward to participating in activities related to learning English.	24	37	24	11	4	2.33	1.07
4.	If there were an English club at school, I would join it.	39	38	17	5	1	1.92	.94
Grand Mean							3.17	

Reliability coefficient $\alpha = .81$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Table 4.2 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "motivational intensity" items, including Items 9 to 16 listed in descending order of their means. The three negative statements are Items 14 to 16. As seen in the table, the internal-consistency reliability coefficient of these items was .79 and their grand mean was 3.08. Among the 8 items, Item 15 had the highest mean. The result indicated that a large number of the participants (65%) were willing to do extra assignment for bonus points, while only a small portion of the participants (11%) would not make more effort to get more bonus points. In addition, Item 12 had the lowest mean, showing that 44% of the participants would not actively make use of every opportunity in daily life to learn English.

Table 4.2

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of the Motivational Intensity Items

No	Item Description	1 ^a	2	3	4	5	M	SD
15.	Even if the English teacher gave an assignment for bonus points, I would not do it.	19 ^b	46	24	8	3	3.68	.97
16.	When doing an English assignment, I put in just enough effort to get by.	12	33	35	14	6	3.30	1.06
10.	After I get my English assignment back, I check and correct my mistakes.	5	18	37	31	9	3.21	1.00
11.	When I have a problem understanding something we are learning in English class, I will, at the first possible opportunity, ask my teacher or other people for help.	4	22	42	26	6	3.10	.93
14.	I made little effort to learn English as long as I can meet the basic class requirements at school.	8	24	36	23	9	2.98	1.07
13.	I actively seize every opportunity to apply what I have learned in English class to daily life.	6	28	36	22	8	2.97	1.03
9.	I actively answer the teacher's questions or take part in activities in English class.	12	29	40	16	3	2.69	.98
12.	In addition to schoolwork, I actively make use of every opportunity in daily life to learn English.	13	31	35	16	5	2.68	1.04
Grand Mean							3.08	

Reliability coefficient $\alpha = .79$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

In addition, Item 14 had the highest SD (1.07), indicating that 32% of the participants made little effort to learn English as long as they can meet the basic class requirements at school. Item 11 had the lowest SD (.93), indicating that only 32% of them, when having problems, would ask their teachers or people for help at the first possible opportunity.

Table 4.3 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "attitudes towards learning English" items, including Items 17 to 24 in descending order of their means. The three negative statements are Items 22 to 24. As seen in the table, the internal-consistency reliability coefficient of these items was .88 and their grand mean was 3.49. Among the 8 items, Item 24 had the highest mean (4.38) and the lowest SD (.92) and it indicated that nearly 90% of the participants thought that learning English was good for them, and only 6% of them considered that they would not benefit from learning English. Item 21 had the lowest mean (2.81), indicating that nearly 40% of the participants didn't consider English learning a part of their life, while 23% of them held the opposite attitudes. Besides, Item 22 had the highest SD (1.23), indicating that more than half of the participants (54%) felt learning English was fun instead of boring.

Table 4.3

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of the Attitudes towards Learning English Items

No	Item Description	1 ^a	2	3	4	5	M	SD
24.	Learning English does me little good.	57 ^b	31	6	3	3	4.38	.92
23.	Learning English is a burden in my life.	25	40	23	6	6	3.72	1.10
18.	Learning English well is very important to me.	2	11	26	40	21	3.66	1.01
20.	Learning English is a challenge worthy of my effort.	4	12	30	34	20	3.54	1.07
19.	I'm glad to have the opportunity to learn English.	4	10	37	32	17	3.49	1.01
22.	I feel that learning English is not fun.	18	36	21	15	10	3.36	1.23
17.	I enjoy learning English	9	22	43	19	7	2.93	1.03
21.	Learning English has become a part of my daily life.	8	31	38	17	6	2.81	1.01
Grand Mean							3.49	

Reliability coefficient $\alpha = .88$

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

In-Class English Learning Behaviors

The English Learning Behaviors Questionnaire, including 48 items adapted from Oxford's (1990) SILL, was used to examine the participants' in-class and outside-class English learning behaviors. Items 1 to 24 were centered on in-class English learning behaviors and composed of three subcategories, namely, memory-based, cognition-based, and affect-based English learning behaviors, with 8 items made for each of them.

Table 4.4

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Memory-Based In-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
2.	I repeat the new words in my head to practice whispering them when the ET is teaching new words.	4 ^b	15	36	35	10	3.31	.98
7.	When the ET is teaching is teaching new words or phrases, I make connections between those new words and phrases and the Chinese meanings given by the teacher.	6	15	35	34	10	3.27	1.03
6.	When the ET is teaching a new word, I try to memorize the new word, its sentence in the textbook and the example sentence given by the teacher.	8	23	32	26	11	3.08	1.12
1.	When the English teacher (ET) is teaching new words, I write them down several times.	8	29	32	24	7	2.95	1.06
8.	I memorize the new words and phrases along with their positions on the page.	16	29	28	20	7	2.74	1.16
3.	I connect the new word with its most common usage when the ET is teaching the new word.	13	34	33	17	3	2.63	1.01
5.	I make connections between the new sentence pattern being taught and those taught in previous lessons.	13	39	32	14	2	2.52	.97
4.	I make connections between the material being taught and material from previous lessons.	14	41	31	13	1	2.46	.93
Grand Mean							2.87	

Reliability coefficient $\alpha = .84$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Table 4.4 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "memory-based in-class

English learning behaviors” items, including Items 1 to 8 in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .84 and their grand mean was 2.87. Among the 8 items, only the means of Items 2, 6, and 7 were higher than 3. The participants’ responses to the three items showed that they paid most of their attention to learning new words, like repeating the new words or whispering them out, memorizing the new words’ example sentences, or connecting the new words and phrases with their Chinese meanings. Item 4 had both the lowest M (2.46) and the lowest SD (.93), indicating that the participants did not frequently connect the new material with the previous lessons. Item 8 had the highest SD (1.16), and the result showed that only 27% of the participants would memorize new words and phrases along with the place they appear on the page, but up to 45% of them would not make use of the related place on the page to facilitate their memorization.

Table 4.5 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants’ responses to the eight “cognition-based in-class English learning behaviors” items, including Items 9 to 16 in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .82 and their grand mean was 3.17. Among the 8 items, the means of Items 9, 10, 11, 12, and 14 were higher than 3. Item 11 had the highest mean (3.65), and according to the participants’ response, 64% would mark or highlight the important sentences or phrases emphasized by English teacher. Item 15 had the lowest mean (2.40), and the result showed that nearly 60% of the participants did not pay attention to the shape of teacher’s mouth to facilitate their learning in English class.

Among the 8 items, Item 12 had the highest SD (1.14), while Item 14 had the lowest SD (.95). The participants’ responses to Item 12 showed that nearly half of them monitored their pronunciation in English class. According to Item 14, 56% of the participants would make use of the words they already knew to help them understand what their English teachers said.

Table 4.5

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Cognition-Based In-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
11.	I mark or highlight the important sentences or phrases emphasized by the ET.	3 ^b	12	21	44	20	3.65	1.04
14.	I try using the words I know to understand what the ET says in English class.	3	9	32	42	14	3.54	.95
9.	I take notes of key points written on the blackboard by the ET.	3	17	33	29	18	3.43	1.06
12.	I pay attention to my own pronunciation when the ET asks us to read the lesson aloud or to practice pronunciation.	8	15	30	32	15	3.32	1.14
10.	I try to guess the meaning of the English sentence before the ET explains it.	6	18	31	34	11	3.27	1.06
13.	I think of Chinese words similar in meaning to the new words taught by the ET.	8	29	32	26	5	2.91	1.03
16.	I try to analyze the structure of a sentence, for example, subject, verb, and object to help me understand the meaning of a sentence.	12	30	30	20	8	2.83	1.12
15.	When listening to the ET, I look at the ET's mouth to help me understand what the ET says.	19	40	28	9	4	2.40	1.02
Grand Mean							3.17	

Reliability coefficient $\alpha = .82$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Table 4.6 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "affect-based in-class English learning behaviors" items, including Items 17 to 24, in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .82 and their grand mean was 3.17. Among the 8 items, the means of Items 17, 18, 20, 22, 23, and 24 were higher than 3. Item 19 had the lowest M (2.56), which indicated that only 17% of the participants would try to answer teacher's questions actively. Besides, Item 23 had the highest SD (1.13) and Item 18 had the lowest SD (.87). In Item 23, 48% of the participants responded that when taking the English listening test, they would try to relax to take the test instead of feeling nervous. As for Item 18, only 25% of the participants would try to take part in the class activities actively, while another 25% expressed they were passive in class activities.

Table 4.6

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Affect-Based In-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
17.	I remind myself to meet the ET's requirements in a pleasant mood.	3 ^b	10	38	35	14	3.48	.94
24.	I remind myself to try again instead of feeling frustrated or giving up when I didn't do well in an English test.	5	8	37	36	14	3.46	1.00
20.	I remind myself to relax instead of feeling anxious in order to understand what the ET says.	3	13	35	39	10	3.39	.95
23.	I remind myself to relax instead of feeling tense or nervous when taking an English listening test.	7	16	29	32	16	3.35	1.13
22.	When having difficulty answering questions on English tests, I remind myself to guess from the context instead of making wild guesses.	8	17	34	32	9	3.16	1.08
18.	I remind myself not to fear frustration but actively take part in class activities.	4	21	50	21	4	3.00	.87
21.	When I feel tired in English class, I manage to cheer myself up and concentrate on the lesson.	10	25	35	24	6	2.92	1.05
19.	I remind myself to take the initiative to answer the ET's questions instead of feeling timid.	13	38	32	13	4	2.56	.99
Grand Mean							3.17	

Reliability coefficient $\alpha = .82$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Outside-Class English Learning Behaviors

The English Learning Behaviors Questionnaire, including Items 25 to 48, were geared towards outside-class English learning behaviors and also composed of three subcategories, namely, individual schoolwork-oriented, individual non-schoolwork-oriented, and interactive English learning behaviors, with 8 items designed for each of the subcategories.

Table 4.7 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "individual schoolwork-oriented outside-class English learning behaviors" items, including Items 25 to 32 in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .84 and their grand mean was 2.52. Among the 8 items, only the means of Item 31, and 32 were higher than 3. The results showed that

nearly 60% of the participants started to review the lessons before the test and nearly 50%, when preparing for the test, would pay attention to the mistakes they made before to avoid making the same mistakes again.

Table 4.7

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Individual Schoolwork-Oriented Outside-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
31.	I start to review the lesson before a test.	5 ^b	14	25	35	21	3.52	1.13
32.	When preparing for a test, I pay attention to the mistakes I have made before to avoid making the same mistakes again	3	17	34	34	12	3.34	1.00
28.	I always review the lesson after English class.	18	40	28	13	1	2.39	.97
26.	I study English on the weekends or holidays.	23	36	26	11	4	2.35	1.06
25.	I study English everyday.	21	45	26	7	1	2.22	.89
30.	After English class, I organize my class notes.	27	40	20	10	3	2.22	1.05
29.	I mark the important vocabulary, idioms or phrases before the ET teaches a new lesson.	25	46	18	9	2	2.17	.98
27.	I always preview the lesson before English class.	33	47	16	3	1	1.91	.81
Grand Mean							2.52	

Reliability coefficient $\alpha = .84$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Item 27 had both the lowest M (1.91) and the lowest SD (.81), which showed that most of the participants (80%) did not preview before English classes. In addition, Item 31, with the highest M (3.52) and the highest SD (1.13), showed that 56% of the participants would review the lessons before the English test, while 19% would not prepare before the English test.

Table 4.8 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "individual non-schoolwork-oriented outside-class English learning behaviors" items, including Items 33 to 40 in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .89 and their grand mean was 2.42. Among the 8 items, Item 38, with the highest M (2.83) and the highest SD (1.21), showed that only 30% of the participants would actively listen to English songs to improve their listening

and expand their vocabulary after class, while up to 40% would not make attempt to do so. In addition, Item 36 had the lowest M (1.94) and the lowest SD (.91), and the result showed that nearly 80% of the participants did not try to practice their English writing after class.

Table 4.8

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Individual Non-Schoolwork-Oriented Outside-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
38.	To improve my English listening skills and to expand my English vocabulary, I actively listen to English songs outside English classes.	17 ^b	23	30	20	10	2.83	1.21
39.	I learn English from daily life, for example, the English menus in restaurants, the bilingual signs in the department stores, or the bilingual signposts in the street.	15	26	32	20	7	2.78	1.13
40.	I try to learn about English culture from daily life, for example, looking for information on the Internet, watching movies, or getting related data from books, newspapers or magazines.	20	35	24	15	6	2.52	1.16
33.	I make use of every possible opportunity to learn or practice my English outside English classes.	14	41	30	10	5	2.51	1.01
35.	I try to improve my English listening outside English classes, for example, listening to CDs of English magazines, listening to English broadcasting programs, watching English TV programs, or going to English movies.	23	31	24	15	7	2.51	1.20
34.	I try to read English outside English classes, for example, when I am waiting for a bus, waiting for a friend, or while shopping at the bookstore.	27	42	22	6	3	2.17	.99
37.	I actively read English newspapers, magazines, or comics outside English classes.	31	40	21	5	3	2.08	.98
36.	I try to practice my English writing outside English classes, for example, writing an email in English, using my cell phone to write a short English message, or writing a card to someone.	36	40	19	4	1	1.94	.91
Grand Mean							2.42	

Reliability coefficient $\alpha = .89$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

Table 4.9 presents the frequencies of response (in %), means (M), and standard deviations (SD) of the participants' responses to the eight "interactive outside-class

English learning behaviors” items, including Items 41 to 48 in descending order of their means. As seen in the table, the internal-consistency reliability coefficient of these items was .89 and their grand mean was 2.18. Among the 8 items, Item 48 had the highest mean, and the result showed that 25% of the participants would ask for help from teachers or classmate when they did not understand something in English. However, a larger proportion of them (44%) would not ask for help from others outside the English class. Item 44 had the lowest M (1.94) and the lowest SD (.88), and according to participants’ response, nearly 80% of them did not practice English conversation with their classmates or friends outside the English class.

Table 4.9

Frequencies of Response (in %), Means (M), and Standard Deviations (SD) of Interactive Outside-Class English Learning Behaviors

No	Item Description	1 ^a	2	3	4	5	M	SD
48.	If I do not understand something in English, I ask for help from teachers or classmates when not in English class.	17 ^b	27	31	17	8	2.71	1.18
43.	When not in English class, I discuss English assignments or new materials with classmates.	22	40	25	11	2	2.30	1.00
46.	When not in English class, I talk to classmates or friends about helpful techniques or ways that help to learn English well.	28	35	24	10	3	2.27	1.08
41.	When not in English class, I make use of every possible way or opportunity to practice my English with others.	26	47	19	6	2	2.12	.93
47.	When not in English class, I and classmates or friends talk about each other’s English learning experiences.	31	41	20	7	1	2.06	.94
42.	When not in English class, I ask for help from others.	30	44	18	7	1	2.05	.91
45.	When not in English class, I share or compare my English notes with classmates	36	38	19	5	2	2.00	.98
44.	When not in English class, I practice English conversation with classmates or friends.	34	45	16	3	2	1.94	.88
Grand Mean							2.18	

Reliability coefficient $\alpha = .89$

Note:

a. 1 = hardly true of me, 2 = not quite true of me, 3 = slightly true of me, 4 = true of me, 5 = very true of me

b. The percentage has been rounded to nearest whole number.

English Learning Achievement Examinations

This section presents the participants' scores on the three English achievement exams. Among the 422 participants, 16 participants' questionnaires turned out to be unusable because they failed to respond to all the questionnaire items. Besides, among the 406 valid questionnaires, 36 questionnaires were not included in the grouping and the reasons of excluding them are listed as follows.

Firstly, to make a clear distinction among the three achievement groups, it was appropriate for the researcher to exclude the 36 participants whose average grades were on the borderline. Secondly, in so doing, the achievement grouping was much more accurate and the level cuts were apparently much clearer. Thirdly, once the 36 participants were excluded from the achievement grouping, validity and reliability of this study was to be increased. In other words, to make the study more valid and reliable, data collected from the 36 participants (8.9%) in total between high and mid as well as between mid and low achievers were excluded from the inferential statistical data analysis procedures of the study. To be more specific, the participants whose average scores from the three English achievement exams ranging from 58 to 60.7 as well as from 72.3 to 72.7 were excluded from the subsequent inferential statistical data analysis in this study.

Table 4.10

Score Range, Number, and Percentage of High, Mid, and Low Achievers

Level	High	In-Between	Mid	In-Between	Low
Score Range	73-100	72.3-72.7	61-72	58-60.7	0-58
Number	123	13	125	23	122
Percentage	30.3%	3.2%	30.8%	5.7%	30.0%

N = 307

Accordingly, as seen in Table 4.10, among the remaining 370 participants, 123 (30.3%) of them were grouped as high achievers, 125 (30.8%) as mid achievers, and 122 (30.0%) as low achievers. As mentioned in Chapter 3, the participants in this study

were classified into three groups based on their average scores from the three English achievement exams. Specifically, high achievers were referred to those with average scores above 73, mid achievers with average scores ranging from 61 to 72, and low achievers with average scores ranging from 0 to 58.

In addition, Table 4.11 shows respective means and grand mean of the high, mid, and low achievers' scores in the three English achievement exams and the respective standard deviations of each set of the scores. As seen in Table 4.11, the grand means of the high, mid, and low groups were 80.53, 66.77, and 47.76 in order. The standard deviation (SD = 3.09) of the mid achievers' average scores of the three exams was much smaller than that of the high (SD = 5.58) and the low achievers (SD = 8.69). That is, the mid achievers' average scores were the most centralized, whereas the low achievers' average scores were the most widely spread out among the three groups.

Table 4.11

Levels, Means, and SDs of the Scores in the Three English Achievement Exams

Level	Mean				Standard Deviation (SD)			
	1st	2nd	Final	Grand	1st	2nd	Final	Grand
High	80.12	83.32	78.15	80.53	7.29	6.17	6.61	5.58
Mid	64.79	70.36	65.16	66.77	5.57	6.06	5.84	3.09
Low	47.41	49.37	46.50	47.76	9.99	10.27	10.55	8.69

N = 307, N_h = 123, N_m = 125, N_l = 122
 N_h = number of high achievers, N_m = number of mid achievers, N_l = number of low achievers

One-Way ANOVA Results

One-way ANOVA was first performed to test, respectively, overall significant differences in English learning motivation and in-class as well as outside-class English learning behaviors across the high, mid, and low English achievers. After the overall significant differences were proved, Scheffe and Tukey Post Hoc Multiple Comparison tests were carried out to locate between-group significant differences among the three achiever groups. The following section presents these one-way ANOVA results.

English Learning Motivation

Table 4.12 summarizes the one-way ANOVA results of testing overall significant difference in the participants' English learning motivation across the high, mid, and low English achiever groups. The results covered descriptive statistics, including group means and standard deviations and group minimum and maximum scores for the overall and all the three English achievement groups. As seen in Table 4.12, an overall significant difference was found at $p < .01$.

Table 4.12

Overall Difference in English Learning Motivation across Groups

	SS	df	MS	F	Sig
Between Groups	14924.18	2	7462.090	40.683	.000
Within Groups	67314.75	367	183.419		
Total	82238.93	369			

Descriptive Statistics				
Group	M	SD	Min	Max
Overall (N = 370)	78.01	14.93	30	120
High (N = 123)	85.95	12.91	60	120
Mid (N = 125)	77.68	13.35	33	110
Low (N = 122)	70.35	14.34	30	106

In view of the overall significance across the groups, Scheffe and Tukey Post Hoc Multiple Comparison tests were carried out to locate between-group significant differences in English learning motivation among the three achiever groups. Table 4.13 summarizes results of the two post hoc significance tests. As seen in the table, significant differences were found at $p < .01$ in all three paired-groups, namely, between high and low, between high and mid, and between mid and low achievers, in their English learning motivation.

Table 4.13

Between-Group Differences in English Learning Motivation

	Between-level	Sig (Scheffe)	Sig (Tukey)
English Learning	High-Low	.000	.000
Motivation	High-Mid	.000	.000
	Mid-Low	.000	.000

In-Class English Learning Behaviors

Table 4.14 summarizes the one-way ANOVA results of testing overall significant difference in the participants' in-class English learning behaviors across the high, mid, and low English achiever groups. The results covered descriptive statistics, including group means and standard deviations and group minimum and maximum scores for the overall and all the three English achievement groups. As seen in Table 4.14, an overall significant difference was found at $p < .01$.

Table 4.14

Overall Difference in In-Class English Learning Behaviors across Groups

	SS	df	MS	F	Sig
Between Groups	10893.223	2	5446.612	30.718	.000
Within Groups	65073.253	367	177.311		
Total	75966.476	369			

Descriptive Statistics				
Group	M	SD	Min	Max
Overall (N = 370)	73.51	14.35	31	115
High (N = 123)	80.01	13.39	51	110
Mid (N = 125)	73.78	12.48	31	115
Low (N = 122)	66.68	14.05	34	102

Likewise, Scheffe and Tukey Post Hoc Multiple Comparison tests were carried out to locate between-group significant differences in students' in-class English learning behaviors among the three achiever groups. Table 4.15 summarizes results of the two

post hoc significance tests. As seen in Table 4.15, significant differences were found at $p < .01$ in all three paired-groups, namely, between high and low, between high and mid, and between mid and low achievers, in their English learning motivation.

Table 4.15

Between-Group Differences in In-Class English Learning Behaviors

	Between-level	Sig (Scheffe)	Sig (Tukey)
In-Class English	High-Low	.000	.000
Learning Behaviors	High-Mid	.001	.001
	Mid-Low	.000	.000

Outside-Class English Learning Behaviors

Table 4.16 summarizes the one-way ANOVA results of testing overall significant difference in the participants' outside-class English learning behaviors across the high, mid, and low English achievers. The results covered descriptive statistics, including group means and standard deviations and group minimum and maximum scores for the overall and all the three English achievement groups. As seen in Table 4.16, an overall significant difference was found at $p < .01$.

Table 4.16

Overall Difference in Outside-Class English Learning Behaviors across Groups

	SS	df	MS	F	Sig
Between Groups	5002.012	2	2501.006	11.149	.000
Within Groups	82325.555	367	224.320		
Total	87327.568	369			

Descriptive Statistics				
Group	M	SD	Min	Max
Overall (N = 370)	57.08	15.38	24	109
High (N = 123)	61.70	16.37	27	109
Mid (N = 125)	56.84	14.26	29	100
Low (N = 122)	52.67	14.20	24	86

Again, Scheffe and Tukey Post Hoc Multiple Comparison tests were carried out to locate between-group significant differences in students' outside-class English learning behaviors among the three achiever groups. Table 4.17 summarizes results of the two post hoc significance tests. As seen in Table 4.17, significant difference at $p < .01$ was found only between high and low English achievers' outside-class English learning behaviors, whereas no significant difference was found between high and mid and neither between mid and low achievers' outside-class English learning behaviors.

Table 4.17

Between-Group Differences in Outside-Class English Learning Behaviors

	Between-level	Sig (Scheffe)	Sig (Tukey)
Outside-Class	High-Low	.000	.000
English Learning	High-Mid	.039	.029
Behaviors	Mid-Low	.093	.073

Pearson Correlation Analysis Result

Table 4.18 summarizes the Pearson correlation analysis result of the link between the participants' in-class and outside-class English learning behaviors. As seen in the table, a positive significant Pearson correlation coefficient ($r = .758$) was found at $p < .01$. In other words, a significant relationship between the participants' in-class and outside-class English learning behaviors was confirmed.

Table 4.18

Correlations between In-Class and Outside-Class English Learning Behaviors

Variables	Mean	SD	Person Correlation Coefficient	Sig
In-Class English Learning Behaviors	73.64	14.48	.758	.000
Outside-Class English Learning Behaviors	56.90	15.55		

N = 406

Simple Regression Analysis Results

The following sections present simple regression analysis results of testing significance of the predictive relationships between VHS students' English learning motivation and in-class English learning behaviors as well as between their English learning motivation and outside-class English learning behaviors. The results included a significance test for all the participants as a whole and significance tests for different English achievement groups to examine if English achievement level would have a significant influence on the aforementioned predictive relationships.

English Learning Motivation and In-Class English Learning Behaviors

Table 4.19 presents the simple regression analysis results of testing significance of the predictive relationships between VHS students' English learning motivation and their in-class English learning behaviors. The results included the significance tests for all the participants as a whole and for different English achiever groups. As seen in Table 4.19, significances at $p < .01$ were found in the predicative relationships between VHS students' English learning motivation and their in-class English learning behaviors in the overall group and also in all the three different achiever groups. Since there was only one predictive variable, i.e., English learning motivation, the Pearson correlation coefficient R and the standardized coefficient β had the same value in each of the four regression models. All the Pearson correlation coefficients were rather high; three of them were above .7 and one was .657. In view of these significantly high coefficients, the adjusted R^2 values showed that the participants' English learning motivation accounted for more than or nearly 50% of the variance in their in-class English learning behaviors in the overall, high achiever, and low achiever groups and accounted for more than 40% of the variance in the mid achiever group. In short, the participants' English learning motivation proved to be a statistically significant predictive variable to predict their in-class English learning behaviors regardless of their English achievement levels.

Table 4.19

Regression Models of English Learning Motivation and In-Class English Learning Behaviors

Group	R ()	Adjusted R ²	Constant	B	Sig
Overall (N = 370)	.745	.554	17.642	.716	.000
High (N = 123)	.730	.528	15.003	.756	.000
Mid (N = 125)	.657	.426	26.107	.614	.000
Low (N = 122)	.707	.495	17.951	.693	.000

English Learning Motivation and Outside-Class English Learning Behaviors

Table 4.20 presents the simple regression analysis results of testing significance of the predictive relationships between VHS students' English learning motivation and their outside-class English learning behaviors. The results included the significance tests for all the participants as a whole and for different English achiever groups. As seen in Table 4.20, significances at $p < .01$ were found in the predicative relationships between VHS students' English learning motivation and their outside-class English learning behaviors in the overall group and also in all the three different achiever groups. Again, English learning motivation was the only predictive variable, so the Pearson correlation coefficient R and the standardized coefficient β had the same value in each of the four regression models. All the Pearson correlation coefficients were moderately high; three of them were above or nearly .7 and one was .606. These moderately high coefficients led to adjusted R^2 values that were slightly lower than the ones found earlier in accounting for the variance in the participants' in-class English learning behaviors. Still, as seen in Table 4.20, the adjusted R^2 values showed that the participants' English learning motivation accounted for more than or nearly 50% of the variance in their outside-class English learning behaviors in the overall, high achiever, and low achiever groups and accounted for nearly 40% of the variance in the mid achiever group. Again, the participants' English learning motivation turned out a statistically significant predictive variable to predict their outside-class English learning behaviors regardless of their English achievement levels.

Table 4.20

Regression Models of English Learning Motivation and Outside-Class English Learning Behaviors

Group	R ()	Adjusted R ²	Constant	B	Sig
Overall (N = 370)	.697	.485	1.032	.718	.000
High (N = 123)	.692	.475	-13.730	.878	.000
Mid (N = 125)	.606	.362	6.554	.647	.000
Low (N = 122)	.742	.547	.949	.735	.000

The rest of this chapter discusses and interprets the aforementioned results of the study in the hope of answering all the research questions presented in Chapter 1. The discussion is divided into the following three main sections: VHS students' English learning motivation, VHS students' English learning behaviors, and the relationship between VHS students' English learning motivation and their English learning behaviors. Discussion on VHS students' English learning behaviors is further divided into three parts, including in-class English learning behaviors, outside-class English learning behaviors, and the relationship between in-class and outside-class English learning behaviors. In addition, discussion on relationships between VHS students' English learning motivation and their English learning behaviors includes relationships between English learning motivation and in-class English learning behaviors and between English learning motivation and outside-class English learning behaviors.

Vocational High School Students' English Learning Motivation

This section answers Research Question 1: "What is VHS students' self-rated degree of their English learning motivation? Are there any significant differences in their English learning motivation between students of higher and lower English achievement levels?" To do so, the researcher of the study discussed and interpreted the descriptive analysis results of the English Learning Motivation Questionnaire and one-way ANOVA results of the VHS students' English learning motivation presented earlier in this chapter.

The results of the English Learning Motivation Questionnaire indicated that the participants of this study reported only moderate degree of English learning motivation ($M = 3.25$), which was in accordance with the result found in the pilot study ($M = 3.26$). Among the three subcategories of English learning motivation, they had the highest scores in attitudes towards learning English ($M = 3.49$), followed by desire to learn English ($M = 3.17$) and then motivational intensity ($M = 3.08$). The results suggested that VHS students in general have positive attitudes in English learning, but they neither show strong desire nor make enough efforts to learn English.

In addition, comparing the results of Items 22, 23, and 24, the researcher found that more than half of the participants (54%) felt learning English was fun, 65% did not regard learning English a burden, and 88% thought that learning English would do them good. There are several possible reasons underlying the above results. First, different from their counterparts in the past, nearly all VHS students nowadays continue their education and enter universities of technologies in Taiwan. Second, under the current educational situation, VHS students are aware of the importance of English and, therefore, do not show strong negative aspects in their motivation for English learning as found in some previous studies (e.g., Liao, 2000; Wu, 2004). Third, it is likely that once their English learning motivation has reached a certain level, they start to enjoy learning English and do not regard it as a burden in their learning process.

As seen in Table 4.12, the mean of higher achievers' English learning motivation was comparatively higher than that of lower achievers. The results corresponded with that found in many previous studies (e.g., Gardner, 1985; Oxford & Shearin, 1994; Peng, 2002) that the higher their English learning motivation students have, the higher achievements they will have in learning English. In addition, based on the SD results of the three achiever groups, the high English achievers' English learning motivation was the most centralized, whereas the low English achievers' English learning motivation varied the most among the three achiever groups. In addition, consistent correlation was found when the minimum and maximum scores in three achiever groups were taken into consideration. That is, the higher English achievers have the higher

sores and the lower achievers have the lower scores in their English learning motivation, both in minimum and in maximum scores.

At last, according to Table 4.13, significant differences were found in all three paired-groups in their English learning motivation. The results suggested that VHS students in Taiwan do differ significantly in their English learning motivation between students of higher and lower English achievement levels. Moreover, higher English achievers appear to have stronger motivation than do lower achievers.

Vocational High School Students' English Learning Behaviors

As mentioned earlier, the discussion on VHS students' English learning behaviors is further divided into three parts, including in-class English learning behaviors, outside-class English learning behaviors, and the relationship between in-class and outside-class English learning behaviors. The researcher of the study would discuss and interpret the descriptive statistics from the results of the English Learning Behaviors Questionnaire, the one-way ANOVA results of the VHS students' in-class and outside-class English learning behaviors, and the Pearson correlation analysis result of the link between the VHS students' in-class and outside-class English learning behaviors presented earlier in this Chapter.

In-Class English Learning Behaviors

This section answers Research Question 2: "What are VHS students' self-rated in-class English learning behaviors? Are there any significant differences in their in-class English learning behaviors between students of higher and lower English achievement levels?" To do so, the researcher of the study discussed and interpreted the descriptive analysis results of the English Learning Behaviors Questionnaire items that were centered on in-class English learning behaviors and one-way ANOVA results of the VHS students' in-class English learning behaviors presented earlier.

The results of the English Learning Behaviors Questionnaire indicated that VHS students' in-class English learning behaviors were slightly above the average ($M = 3.07$).

The results suggested that VHS students do not actively engage in English learning activities and most of them seem to show a passive learning attitude in their English classes. In addition, based on the means of the three subcategories of in-class English learning behaviors found in the study, VHS students are likely to engage themselves more in cognition-based ($M = 3.17$) and affect-based ($M = 3.17$) than in memory-based ($M = 2.87$) English learning activities in their English classes.

According to the researcher's personal experience in teaching English, the following reasons may explain VHS students' inactive engagement of memory-based English learning activities in their English classes. First, VHS students do not make enough efforts trying to memorize materials taught in their English classes. Second, they are probably short of the habit or ability of making connections between the newly taught materials with the old ones. Third, they may not have enough knowledge of memory strategies to facilitate their learning English in the class.

In addition, some interesting findings were noticed when the researcher examined the questionnaire items in details. For example, comparing the results of Items 3, 4, and 5, the researcher found that about 50% of the participants would not connect a new word with its most common usage or the previous lessons with the new learning material, not to mention connecting related sentence patterns with the newly taught sentence patterns. In conclusion, VHS students appear to have difficulty in memorizing new words or phrases as well as in making connections between newly and previously taught materials in learning English.

When examining Items 9 and 12, the researcher found that 47% of the participants were good English learners, for they took notes to mark the important parts and read along with the teachers to practice their pronunciation in their English classes. These good learning behaviors of VHS students reflect the positive outcomes of English education. More than half of VHS students have good in-class learning habits, like taking notes, marking the key points, and trying to improve their pronunciation. If the percentage of such good learners can be increased, VHS students' English proficiency will be elevated to a higher level in the near future.

Besides, according to the results of Items 17, 20, and 24, half of the participants responded that they would try to meet the teachers' requirements in a pleasant mood, they would not give up easily when they did not do well in the test, and they would try to relax instead of feeling anxious to have more understanding of what the teacher said in class. These results suggested that VHS students are inclined to learn English in a pleasant way so that they can reduce their anxiety and better tolerate their frustration on English tests.

At last, when comparing the results of Items 22 and 23, the researcher found that nearly half of the participants would avoid being nervous when taking the English listening tests, and tried to guess from the context instead of making wild guesses on English tests. The findings are quite inspiring to the researcher, since VHS students appear to be able to stay calm when taking tests and try to carry on when they encounter difficulties in learning English or taking English tests.

As seen in Table 4.14, the mean of higher achievers' in-class English learning behaviors was comparatively higher than that of lower achievers' in-class English learning behaviors. In addition, because of the high scores of the high English achievers, it showed that they are effective or strategic English learners. Furthermore, the SD results showed that the mid-level English achievers' in-class English learning behaviors were the most centralized, indicating that this group of students have more similar learning behaviors in English class. The underlying reasons are likely to be that, first, for the mid-level English achievers, they have more space for improvement in English and second, their in-class English learning behaviors are thus much more alike when compared with other achiever groups.

At last, according to Table 4.15, significant differences were also found in all three paired-groups in their in-class English learning behaviors. Therefore, it can be concluded that there are significant differences in VHS students' in-class English learning behaviors between students of higher and lower English achievement levels.

Outside-Class English Learning Behaviors

This section answers Research Question 3: “What are VHS students’ self-rated outside-class English learning behaviors? Are there any significant differences in their outside-class English learning behaviors between students of higher and lower English achievement levels?” To do so, the researcher of the study discussed and interpreted the descriptive analysis results of the English Learning Behaviors Questionnaire that were geared towards outside-class English learning behaviors and one-way ANOVA results of the VHS students’ outside-class English learning behaviors presented earlier.

The results of the English Learning Behaviors Questionnaire showed that the participants of the study did not actively engage in English learning activities outside their English classes ($M = 2.37$). The means of the three subcategories of outside-class English learning behaviors were all below 3 as listed in the following order from the largest to the smallest: individual schoolwork-oriented ($M = 2.52$), individual non-schoolwork-oriented ($M = 2.42$), and interactive English learning behaviors ($M = 2.18$). All in all, the participants got very low scores on most of the questionnaire items, which suggested that VHS students do not actively take on English learning activities outside their English classes.

In addition, the researcher noticed a number of disappointing phenomena in the participants’ outside-class English learning when examining the questionnaire items in details. For example, the results of Items 27 and 31 showed that a large percentage of the participants (80%) did not preview the lesson before classes and barely more than half of them (56%) reviewed class materials before the test, whereas 20% made no preparation at all before the test. In accordance with Liao’s study (2000), most students are still test-oriented and they only preview or study English before tests.

Besides, the participants scored relatively low from Items 33 to 40 with regard to their individual non-schoolwork oriented English learning behaviors outside the class. These results suggested that as individual learners outside their English classes, VHS students do not make good use of opportunities in daily life or English learning materials around them to help them improve their English.

The participants got the lowest scores in their interactive outside-class English learning behaviors ($M = 2.18$) from Items 41 to 48. The means of the 8 items in this subcategory were all lower than 3. The results showed that most of the participants did not try to interact with their classmates, friends, or English teachers once they got out of the classroom. In addition, Items 36 and 44 had the lowest mean ($M = 1.94$) of all the 24 “outside-class English learning behaviors” items. The results suggested that VHS students rarely practice their English writing or conversation with classmates or friends outside the English class. The potential reasons for this phenomenon are given as follows. First, there are no writing and speaking tests on the VHS students’ English entrance exam. Therefore, affected by the test-oriented environment, they tend to ignore these two skills. Second, conversation programs in VHS curriculum have long been neglected. Consequently, students’ interests or motivation in talking with others in English outside the English class have long not been encouraged.

Compared with the grand mean of in-class English learning behaviors, the grand mean of outside-class English learning behaviors was comparatively low. This finding reflects the real English learning situation of VHS students’ in Taiwan. That is, when in the English class, they may make efforts to a certain degree to engage themselves in English learning activities. However, once they get out of the class, they make little attempt to learn or use English.

As seen in Table 4.16, the mean of higher achievers’ outside-class English learning behaviors was comparatively higher than that of lower achievers. In addition, the standard deviations showed that the high English achievers varied the most in their outside-class English learning behaviors when compared with the other two achiever groups. The following explanation might account for such phenomena. Some high achievers may feel that they have already achieved good English proficiency; therefore, they do not feel the need to work as hard outside the English class as the other two achiever groups. However, some other high achievers may be the hard-working and diligent type of students and they are determined to make good use of opportunities and resources to improve their English proficiency outside the English class.

At last, as seen in Table 4.17, no significant differences were found between high and mid achievers as well as mid and low achievers in terms of their outside-class English learning behaviors; significant difference was found only between high and low achievers. The results suggested that VHS students with relatively high English proficiency are more inclined to carry on their English learning outside their English classes than those with relatively low English proficiency.

To sum up, in general VHS students in Taiwan do not show enough English learning behaviors and they engage in more in-class than outside-class English learning behaviors. At the same time, higher English achievers tend to show more in-class English learning behaviors than do lower achievers, while such significant difference seems to only exist between rather high and rather low achievers when it comes to outside-class English learning behaviors.

The Relationship between In-Class and Outside-Class English Learning Behaviors

This section answers Research Question 4: “Is there a significant relationship between VHS students’ in-class and outside-class English learning behaviors?” To do so, the researcher of the study discussed and interpreted the Pearson correlation analysis result of the link between the VHS students’ in-class and outside-class English learning behaviors presented earlier.

As seen in Table 4.18, the grand means of the participants’ in-class and outside-class English learning behaviors were 73.64 and 56.90, respectively. It indicated that VHS students are likely to demonstrate more in-class English learning behaviors than outside-class English learning behaviors. In addition, a positive significant Pearson correlation was found between VHS students’ in-class and outside-class English learning behaviors. This positive correlation result suggested that the more VHS students engage themselves in English learning activities in their English classes, the more they carry on their English learning by involving themselves in English learning events, either individually or with others, outside their English classes.

Relationships between Vocational High Students' English Learning Motivation and English Learning Behaviors

This section centers on the relationships between VHS students' English learning motivation and their English learning behaviors. It is further divided into two parts: English learning motivation and in-class English learning behaviors and English learning motivation and outside-class English learning behaviors.

English Learning Motivation and In-Class English Learning Behaviors

Simple linear regression analyses were used to examine the relationships between VHS students' English learning motivation and their in-class English learning behaviors. With the results, the researcher intended to answer Research Questions 5: "Is there a systematic, significant relationship between VHS students' English learning motivation and their in-class English learning behaviors? Does such a relationship vary according to VHS students' English learning achievement levels?"

As seen in Table 4.19, significant relationships were found between VHS students' English learning motivation and in-class English learning behaviors among the high, mid, and low achievers. That is, English learning motivation proved to effectively predict their in-class English learning behaviors in the three achiever groups.

In addition, English learning motivation was significantly related to in-class English learning behaviors in all three achiever groups as well as in the overall group. Specifically, English learning motivation accounted for 53% of the variance ($R^2 = .53$) in the high achievers' in-class English learning behaviors, and accounted for 43% of the variance ($R^2 = .43$) and 50% of the variance ($R^2 = .50$) in the mid and low achievers' in-class English learning behaviors, respectively. All in all, English learning motivation accounted for 55% of the variance in all the participants' in-class English learning behaviors. The result suggested that VHS students' English learning motivation tend to account for more than half of the variance in their in-class English learning behaviors, whereas the other half of the variance might be accounted by other variables such as anxiety, learning strategy training, learning preferences, or learning styles.

To sum up, there is a significant predictive relationship between VHS students' English learning motivation and their in-class English learning behaviors. Furthermore, such a predictive relationship does not vary according to VHS students' English learning achievement levels.

English Learning Motivation and Outside-Class English Learning Behaviors

Simple linear regression analyses were also used to examine the relationships between VHS students' English learning motivation and their outside-class English learning behaviors. With the results, the researcher would answer Research Question 6: "Is there a systematic, significant relationship between VHS students' English learning motivation and their outside-class English learning behaviors? Does such a relationship vary according to VHS students' English learning achievement levels?"

As seen in Table 4.20, significant relationships were found between VHS students' English learning motivation and outside-class English learning behaviors among the high, mid, and low achievers. Again, English learning motivation proved to effectively predict their outside-class English learning behaviors in the three achiever groups.

In addition, English learning motivation was significantly related to outside-class English learning behaviors in all three achiever groups as well as in the overall group. Specifically, English learning motivation accounted for 48% of the variance ($R^2 = .48$) in the high achievers' outside-class English learning behaviors, and accounted for 37% of the variance ($R^2 = .37$) and 55% of the variance ($R^2 = .55$) in the mid and low achievers' outside-class English learning behaviors, respectively. All in all, English learning motivation accounted for 49% of the variance in all the participants' outside-class English learning behaviors. The result suggested that VHS students' English learning motivation seems to be able to account for nearly half of the variance in their outside-class English learning behaviors. However, like what has been mentioned in the previous section, the other half of the variance in VHS students' outside-class English learning behaviors will have to be accounted for by variables other than their English learning motivation.

To sum up, there is a significant predictive relationship between VHS students' English learning motivation and their outside-class English learning behaviors. Furthermore, such a predictive relationship does not vary according to VHS students' English learning achievement levels.