



## **Chapter Five**

### **Results and Discussion**

In this chapter, analysis of the collected data and discussion of the results of the analysis are presented. The results obtained from the analysis of the data are as follows. First, we will present the results of the Chinese and English summary writing scores; second, the comparison of the pretest and posttest scores, inclusive of two English summary writing tasks, two GEPT reading comprehension tasks, and two GEPT writing tasks. Third, the results of the subjects' JCEE composition scores are described, followed by an analysis of the responses to the pretest and posttest questionnaires. Furthermore, for a more detailed investigation of the effects of summary writing instruction on senior high school students' reading and writing abilities from the above aspects, the findings of the present study are presented and discussed quantitatively.

#### **5.1 Results**

In the following sections, we present in sequence the results of the subjects' Chinese and English summary writing scores, their pretest and posttest scores, as well as the results of the subjects' JCEE composition scores and their responses to the pretest and posttest questionnaires.

### **5.1.1 Comparison of the Reliability of the Graders and the Questionnaire**

In order to determine whether or not the subjects' performance in both the GEPT writing task and the summary writing task are highly correlated, a reliability test among the three graders was first computed independently.

There were three graders who took the responsibility of assessing both the GEPT writing task and the summary writing tasks. Thus, the reliability among them is very important. Analysis shows that for the GEPT writing, the Cronbach's  $\alpha$  of the pretest was 0.808, and that of the posttest was 0.857. As for the summary writing, the Cronbach's  $\alpha$  of the pretest was 0.869, and that of the posttest was 0.817.

Secondly, the reliability of the questionnaires developed to elicit the subjects' attitudes toward English summary writing was also examined here. In the pretest, the Cronbach's  $\alpha$  was 0.769, while in the posttest, the Cronbach's  $\alpha$  was 0.814.

Furthermore, with respect to the four main factors (Confidence, Anxiety, Usefulness, and Preference) investigated in the questionnaire, analysis showed that as for the Confidence factor, the Cronbach's  $\alpha$  of the pretest was 0.768, and that of the posttest was 0.760. Regarding the Anxiety factor, the Cronbach's  $\alpha$  of the pretest was 0.569, and that of the posttest was 0.702. As to the Usefulness factor, the Cronbach's  $\alpha$  of the pretest was 0.643, and that of the posttest was 0.646. Concerning the Preference factor, the Cronbach's  $\alpha$  of the pretest was 0.509, and that of the posttest

was 0.490.

### **5.1.2 Comparison of the Chinese and English Summary Writing Scores**

This section presents a comparison of the subjects' Chinese and English summary writing scores in an attempt to probe the effects of the subjects' Chinese summative abilities on writing English summaries.

First of all, the mean scores and standard deviation were computed to explore whether the experimental group demonstrated better performance in the Chinese summary writing task and two English writing tasks. As shown in Table 5.1, in the Chinese summary writing task, the mean scores of the control group were 3.26, while those of the experimental group were 2.76. The significance reached the acceptable significance level of .05. However, in the pretest English summary task, the mean scores of the control group were 1.8647 and those of the experimental group were 1.9730. The significance, however, did not reach the acceptable significance level of .05. However, in the posttest summary task, the mean scores of the control group were 1.5749 and those of the experimental group were 2.1216. The significance did reach the acceptable significance level of .05.

**Table 5.1 Comparison of the Mean and Standard Deviation of Chinese and English Summary Writing Scores**

		N	Mean	SD	F	P
Chinese summary	Control Group	69	3.26	1.268	4.398	.038
	Experimental Group	74	2.76	1.577		
English Summary (Pretest)	Control Group	69	1.8647	.91701	.598	.441
	Experimental Group	74	1.9730	.75400		
English Summary (Posttest)	Control Group	69	1.5749	.78149	19.160	.000
	Experimental Group	74	2.1216	.71209		

Note.  $p < .05$  N= Number M= Mean SD= Standard Deviation

Second, a correlation analysis was conducted to assess the relationship between the Chinese summary writing scores and the pretest and posttest English summary writing scores. As shown in Table 5.2, the correlation coefficients between Chinese summary writing and the pretest English summary writing were 0.85, indicating that there was no obvious significance. Besides, the correlation coefficients between the Chinese summary writing task and the posttest summary writing task were -0.024, showing that there was no significant difference either. On the other hand, the correlation coefficients between the pretest and posttest summary writing scores were 0.296, which was statistically significant.

**Table 5.2 Correlation Matrix of the Chinese and English Summary Writing**

		Chinese Summary Writing	Pretest Summary Writing	Posttest Summary Writing
Chinese Summary Writing	Pearson Correlation	1	.085	-.024
	Sig. (2-tailed)	.	.312	.772
	N	143	143	143
Pretest Summary Writing	Pearson Correlation	.085	1	.296**
	Sig. (2-tailed)	.312	.	.000
	N	143	143	143
Posttest Summary Writing	Pearson Correlation	-.024	.296**	1
	Sig. (2-tailed)	.772	.000	.
	N	143	143	143

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 5.1.3 Comparison of the Pretest and Posttest Scores

In this section, a comparison of the subjects' pretest and posttest scores is made in an attempt to specify the effects of the treatment in this study. The scores analyzed here include the subjects' pretest/posttest GEPT reading comprehension scores, pretest/posttest GEPT writing scores, and pretest/posttest summary scores.

First, One-way ANOVA was used to investigate whether or not the experimental group demonstrated better performance than the control group after the instruction of summary writing was completed.

Table 5.3 shows that the p value of the pretest GEPT reading comprehension scores was 0.165; that of the pretest GEPT writing scores was 0.083, and the p value of the pretest summary writing was 0.441. That is to say, in the pretest the performance of the experimental group and the control group showed no statistical

significance.

**Table 5.3 ANOVA of the Pretest Scores**

		Sum of Squares	df	Mean Square	F	P
Pretest	Between Groups	415.222	1	415.222	1.948	.165
GEPT	Within Groups	30048.204	141	213.108		
Reading	Total	30463.427	142			
Pretest	Between Groups	1.337	1	1.337	3.042	.083
GEPT	Within Groups	61.976	141	.440		
Writing	Total	63.313	142			
Pretest	Between Groups	.418	1	.418	.598	.441
Summary	Within Groups	98.683	141	.700		
Writing	Total	99.102	142			

However, significant differences were observed in the posttest. As shown in Table 5.4, the p value of the posttest GEPT reading was 0.004; that of the posttest GEPT writing was 0.000, and the p value of the posttest summary writing was 0.000. Since the p values of the posttest scores were very low, differences between the experimental group and the control group were deemed significant.

**Table 5.4 ANOVA of the Posttest Scores**

		Sum of Squares	Df	Mean Square	F	P
Posttest	Between Groups	2529.267	1	2529.267	8.522	.004
GEPT	Within Groups	41847.726	141	296.792		
Reading	Total	44376.993	142			
Posttest	Between Groups	14.436	1	14.436	26.152	.000
GEPT	Within Groups	77.834	141	.552		
Writing	Total	92.270	142			
Posttest	Between Groups	10.674	1	10.674	19.160	.000
Summary	Within Groups	78.546	141	.557		
Writing	Total	89.220	142			

Secondly, the mean scores and standard deviation regarding the GEPT reading task, the GEPT writing task, and summary writing in the posttest were contrasted with those from the posttest counterparts in order to investigate the effect of the instruction of summary writing.

From Table 5.5, it is apparent that both the control group and the experimental group showed progress in GEPT reading comprehension tasks. The mean scores of the control group in the posttest were 2.77 points higher than their scores in the pretest; while the mean scores of the experimental group in the posttest were 14.59 points better than their pretest scores. Besides, the p values of the differences in each group were statistically significant. This is clear indication that although both groups made progress in their reading comprehension abilities, far more improvement was observed in the experimental group.

**Table 5.5 Comparison of the Mean and Standard Deviation of GEPT Reading Comprehension Scores**

	GEPT Reading	N	Mean	SD	Difference	P
Control group	Pretest	69	49.87	14.119	2.77	.000
	Posttest	69	52.64	16.943		
Experimental group	Pretest	74	46.46	15.031	14.59	.000
	Posttest	74	61.05	17.489		

Note. N= Number M= Mean SD= Standard Deviation

As to the subjects' performance in the pretest and posttest GEPT writing tasks, the results can be seen in Table 5.6. By comparing the mean scores and standard deviation of the control group in the pretest and posttest GEPT writing tasks, it is clear that the control group showed no progress—in fact, its performance showed 2.808 points lower than that in the pretest and the p value of the difference in the control group reached the significance level of .05.

However, when comparing the mean scores and standard deviation of the experimental group in the pretest and posttest GEPT writing tasks, it is apparent that this particular group made considerable progress in the posttest—1.622 points higher than they did in the pretest and the p value of the experimental group was apparently significant.

**Table 5.6 Comparison of the Mean and Standard Deviation of GEPT Writing Scores**

	GEPT Writing	N	Mean	SD	Difference	P
Control group	Pretest	69	2.5362	.73034	-.2808	.008
	Posttest	69	2.2560	.80062		
Experimental group	Pretest	74	2.7297	.59341	1.622	.000
	Posttest	74	2.8919	.68493		

Note. N= Number M= Mean SD= Standard Deviation

Table 5.7 below indicates the results of the comparison of the subjects' pretest



and posttest summary writing scores. In the posttest, the mean scores of the control group were 2.898 points worse than those in the pretest and the difference was statistically significant. In contrast, the experimental group made some progress in the posttest, with their mean scores in the posttest being 0.1486 points higher than those in the pretest, though the difference did not reach the acceptable significance level of .05.

**Table 5.7 Comparison of the Mean and Standard Deviation of Summary Writing**

	Summary Writing	N	Mean	SD	Difference	P
Control group	Pretest	69	1.8647	.91710	-.2898	.001
	Posttest	69	1.5749	.78149		
Experimental group	Pretest	74	1.9730	.75400	.1486	.121
	Posttest	74	2.1216	.71209		

Note. N= Number M= Mean SD= Standard Deviation

Thirdly, a correlation analysis was conducted to investigate whether there was an increase in the correlation coefficients among the GEPT reading scores, GEPT writing scores and summary writing scores after the instruction of summary writing skills was provided to the subjects. The results of pretests and posttest were thus compared separately to see if summary writing instruction was indeed a significant factor.

By comparing the results sketched in Tables 5.8 and 5.9, we find that the

correlation coefficients among the GEPT reading, GEPT writing, and summary writing of the control group in the pretest and posttest were statistically significant.

What is more, the correlation coefficients in the posttest were higher than those in the pretest.

**Table 5.8 Correlation Matrix of the Pretest Done by the Control Group**

		Pretest GEPT Reading	Pretest GEPT Writing	Pretest Summary Writing
Pretest GEPT Reading	Pearson Correlation Sig. (2-tailed) N	1 .69	.238** .049 69	.346** .004 69
Pretest GEPT Writing	Pearson Correlation Sig. (2-tailed) N	.238** .049 69	1 .69	.327** .006 69
Pretest summary Writing	Pearson Correlation Sig. (2-tailed) N	.346** .004 69	.327** .006 69	1 .69

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 5.9 Correlation Matrix of the Posttest Done by the Control Group**

		Posttest GEPT Reading	Posttest GEPT Writing	Posttest Summary Writing
Posttest GEPT Reading	Pearson Correlation Sig. (2-tailed) N	1 .69	.465** .002 69	.420** .000 69
Posttest GEPT Writing	Pearson Correlation Sig. (2-tailed) N	.365** .002 69	1 .69	.399** .001 69
Posttest Summary Writing	Pearson Correlation Sig. (2-tailed) N	.420** .000 69	.399** .001 69	1 .69

\*\* Correlation is significant at the 0.01 level (2-tailed).

Furthermore, to look further into the effect of the instruction of summary writing given by the researcher to the experimental group, the correlation coefficients among GEPT reading, GEPT writing and summary writing were analyzed, as shown in Table 5.10 & 5.11.

Compared with those of the control group, the correlation coefficients of the experimental group displayed different results. Originally, the correlation coefficients between the GEPT writing task and the summary writing task in the pretest were 0.154 and were not significant at all, though the correlation coefficients between the GEPT reading and writing scores (0.432) and those between the GEPT reading and summary writing (0.390) were significantly different. However, after the treatment, the correlation coefficients between the GEPT writing and summary writing were 0.336, which was statistically significant.

**Table 5.10 Correlation Matrix of the Pretest Done by the Experimental Group**

		Pretest GEPT Reading	Pretest GEPT Writing	Pretest Summary Writing
Pretest GEPT Reading	Pearson Correlation Sig. (2-tailed) N	1 .74	.432** .000 74	.390** .001 74
Pretest GEPT Writing	Pearson Correlation Sig. (2-tailed) N	.432** .000 74	1 .74	.154 .192 74
Pretest summary Writing	Pearson Correlation Sig. (2-tailed) N	.390** .001 74	.154 .192 74	1 .74

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 5.11 Correlation Matrix of the Posttest Done by the Experimental Group**

		Posttest GEPT Reading	Posttest GEPT Writing	Posttest Summary Writing
Posttest GEPT Reading	Pearson Correlation	1	.448**	.342**
	Sig. (2-tailed)	.	.000	.003
	N	74	74	74
Posttest GEPT Writing	Pearson Correlation	.448**	1	.336**
	Sig. (2-tailed)	.000	.	.003
	N	74	74	74
Posttest Summary Writing	Pearson Correlation	.342**	.336**	1
	Sig. (2-tailed)	.003	.003	.
	N	74	74	74

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 5.1.4 Comparison of the JCEE Composition Scores

In this section, a comparison of the JCEE scores of the experimental group and the control group is presented. What is more, correlation analysis of the summary writing and JCEE composition scores is conducted to investigate the effect of the summary writing instruction on the subjects' JCEE composition performance.

First, One-way ANOVA was used to investigate whether the experimental group showed better performance than the control group in the JCEE composition task after receiving the instruction on summary writing. By comparing the mean scores and standard deviation, as shown in Table 5.12, it is clear that the experimental group did get better scores in the JCEE compositions. The mean scores of the control group were 6.49 and those of the experimental group were 6.62, but its significance

did not reach the acceptable significance level of 0.05.

**Table 5.12 Comparison of the Mean and Standard Deviation of JCEE Composition Scores**

	N	Mean	SD	F	P
Control group	69	6.49	3.256	.063	.803
Experimental group	74	6.62	2.909		

Note.  $p < .05$  N= Number M= Mean SD= Standard Deviation

Second, in order to look into the possibilities whether the subjects' summary writing performances have anything to do with their composition performances in the JCEE, a correlation analysis was also conducted. From Tables 5.13 & 5.14, we can see that the correlation coefficients of the control group between the pretest English summary writing and the JCEE composition scores were 0.406 and it was statistically significant. In addition, the correlation coefficients of the control group between the posttest English summary writing and the JCEE composition scores were 0.427 and it was of statistical significance as well. In short, the correlation analysis of the control group shows not much different results.

**Table 5.13 Correlation Matrix of the Pretest Summary Writing, and JCEE****Composition (the Control Group)**

	Pretest Summary Writing	JCEE Composition
Pretest Summary Writing	1	.406**
Pearson Correlation	.	.000
Sig. (2-tailed)	69	69
N		
JCEE Composition	.406**	1
Pearson Correlation	.000	.
Sig. (2-tailed)	69	69
N		

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 5.14 Correlation Matrix of the Posttest Summary Writing and JCEE****Composition (the Control Group)**

	Posttest Summary Writing	JCEE Composition
Posttest Summary Writing	1	.427**
Pearson Correlation	.	.000
Sig. (2-tailed)	69	69
N		
JCEE Composition	.427**	1
Pearson Correlation	.000	.
Sig. (2-tailed)	69	69
N		

\*\* Correlation is significant at the 0.01 level (2-tailed).

By contrast, the experimental group showed quite different results, as indicated in Tables 5.15 & 5.16. In the pretest, the correlation coefficients between summary writing and JCEE composition scores were 0.138 and it was non-significant. However, in the posttest, the correlation coefficients between the summary writing and JCEE composition scores were 0.355, which turned out to be statistically significant.

**Table 5.15 Correlation Matrix of the Pretest Summary Writing and JCEE****Composition (the Experimental Group)**

	Pretest Summary Writing	JCEE Composition
Pretest Summary Writing	1	.138
Pearson Correlation	.	.000
Sig. (2-tailed)	74	74
N		
JCEE Composition	.138	1
Pearson Correlation	.000	.
Sig. (2-tailed)	74	74
N		

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 5.16 Correlation Matrix of the Posttest Summary Writing and JCEE****Composition (the Experimental Group)**

	Posttest Summary Writing	JCEE Composition
Posttest Summary Writing	1	.355**
Pearson Correlation	.	.000
Sig. (2-tailed)	74	74
N		
JCEE Composition	.355**	1
Pearson Correlation	.000	.
Sig. (2-tailed)	74	74
N		

\*\* Correlation is significant at the 0.01 level (2-tailed).

**5.1.5 Comparison of the Responses to the Pretest and Posttest Questionnaires**

This section presents the results of the questionnaire survey, in particular the subjects' responses toward summary writing instruction. Their responses to the five-point scale statements in the questionnaire were collected and carefully analyzed to explore the change of the subjects' attitudes toward summary writing.

As mentioned previously, the questions included in the questionnaire can be categorized based on four factors: Confidence, Anxiety, Usefulness, and Preference. In order to investigate whether the subjects showed apparent differences in terms of these four factors, a Chi-square test was conducted. Table 5.17 indicates that the experimental group and the control group showed no obvious differences with regard to the four factors, as the p values in the pretest and posttest did not reach the acceptable significance level of .05.

**Table 5.17 Comparison of the P Values of the Four Factors**

Factor	Pretest p value	Posttest p value
I. Confidence Factor (Q1, Q5, Q9, Q13, Q17)	.462	.362
II. Anxiety Factor (Q3, Q7, Q11, Q15, Q19)	.360	.314
III. Usefulness Factor (Q4, Q8, Q12, Q16, Q20)	.864	.413
IV. Preference Factor (Q2, Q6, Q10, Q14, Q18)	.195	.206

Although the comparison of the attitude changes toward the above-mentioned four factors showed no apparent differences, it was necessary to further explore the subjects' attitudes toward each individual question in the questionnaires. Therefore, a Chi-square test was applied again to compare and analyze the results of each individual question in the questionnaire. This was done to see whether there was statistical significance between the responses to each question gathered from the experimental and control groups in the pretest and the posttest.



As shown in Table 5.18, the results of the Chi-square test indicated that the experimental group and the control group exhibited no significant differences in the questionnaire that they filled out immediately after they finished the pretest summary writing task. However, in the one that they filled out right after the posttest, the experimental group and the control group indeed displayed statistical significance in some of the questions (Q2, Q5, Q10, Q11, Q12, and Q18).

**Table 5.18 Comparison of the P Values of the Questionnaires (Experimental Group vs. Control Group)**

Questionnaire item	Pretest p value	Posttest p value
1. I consider it easy to write a summary in English.	.125	.099
2. I will make the best use of every opportunity to learn to write English summaries.	.568	.042
3. I don't know how to start writing an English summary when I am asked to.	.147	.202
4. If college entrance exams do not include the summary writing task, I don't feel the need to learn how to write an English summary.	.510	.160
5. I would like to spend my free time practicing summary writing outside the classroom.	.979	.001
6. I will first locate the topic sentence of the whole passage when I write an English summary.	.411	.199
7. If summary writing takes the place of guided writing in the JCEE, I am worried that I won't be able to get good grades.	.660	.133
8. I do not think English summary writing is useful to me in the English learning process.	.605	.240
9. English summary writing is a joyful writing process.	.990	.297
10. I will delete the repeated or unimportant materials of the	.486	.000

passage first, when I write an English summary.		
11. If I have a choice, I would prefer not to write an English summary.	.480	.037
12. Learning how to write an English summary is helpful to my learning of English.	.318	.031
13. I think I have a special talent in English summary writing.	.345	.789
14. I will categorize the same groups of verbs or nouns, and substitute them with more general terms first, when I write an English summary.	.663	.242
15. When I think of English summary writing, I have a headache.	.895	.068
16. It is worthwhile to learn to write an English summary.	.952	.264
17. I feel comfortable when I am asked to write an English summary.	.487	.167
18. Before I start writing an English summary, I will look through the text carefully from the very beginning.	.123	.006
19. I feel uneasy when I am asked to share my summary with my classmates.	.405	.052
20. To satisfy future academic needs, I have to be proficient in English summative skills.	.334	.211

In order to further analyze the differences of the responses to the posttest questionnaire by the experimental group and the control group, an analysis employing the Frequency Table was conducted to compare the percentage of the responses. Some of the significant results are presented as follows.

First, as shown in Table 5.19, 52.2% of the control group subjects and 66.2% of the experimental group subjects agreed or strongly agreed that they would make the best use of every opportunity to learn to write English summaries. However, there were 37.7% of the control subjects who showed no preference to the statement “I will

make the best use of every opportunity to learn to write English summaries,” and the percentage was quite high.

**Table 5.19 Comparison of the Percentage of the Responses to Q2**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	4.3%	5.8%	37.7%	29.0%	23.2%
Experimental Group	1.4%	12.2%	20.3%	47.3%	18.9%

Second, Table 5.20 indicates that 47.8% of the control subjects responded with “no comment” with respect to the statement “I would like to spend my free time practicing summary writing outside the classroom.” Nonetheless, 56.8% of the experimental subjects agreed or strongly agreed that they would like to spend their free time practicing summary writing outside the classroom.

**Table 5.20 Comparison of the Percentage of the Responses to Q5**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	5.8%	7.2%	47.8%	27.5%	11.6%
Experimental Group	2.7%	20.3%	20.3%	50.0%	6.8%

Besides, as revealed in Table 5.21, 46.4% of the control subjects again responded with “no comment” regarding the statement “I will delete the repeated or

unimportant sentences of the passage first, when I write an English summary.”

Nevertheless, 75.7% of the experimental subjects agreed or strongly agreed with the statement.

**Table 5.21 Comparison of the Percentage of the Responses to Q10**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	4.3%	17.4%	46.4%	27.5%	4.3%
Experimental Group	1.4%	8.1%	14.9%	55.4%	20.3%

Furthermore, Table 5.22 indicates that 43.5% of the control subjects responded with “no comment” to the statement “If I have a choice, I would prefer not to write an English summary.” However, 43.2% of the experimental subjects disagreed or strongly disagreed with the statement.

**Table 5.22 Comparison of the Percentage of the Responses to Q11**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	15.9%	18.8%	43.5%	13.0%	8.7%
Experimental Group	10.8%	32.4%	24.3%	25.7%	6.8%

Moreover, as shown in Table 5.23, 49.3% of the control subjects again responded with “no comment” regarding the statement “Learning how to write an English summary is helpful to my learning of English.” Conversely, 56.8% of the

experimental subjects agreed or strongly agreed with the statement.

**Table 5.23 Comparison of the Percentage of the Responses to Q12**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	4.3%	1.4%	49.3%	33.3%	11.6%
Experimental Group	2.7%	10.8%	29.7%	47.3%	9.5%

Lastly, Table 5.24 shows that 68.1% of the control subjects and 74.3% of the experimental subjects agreed or strongly agreed to the statement that “Before I start writing an English summary, I will look through the text carefully from the very beginning.”

**Table 5.24 Comparison of the Percentage of the Responses of Q18**

	Strongly disagree	disagree	no comment	agree	strongly agree
Control Group	4.3%	10.1%	17.4%	36.2%	31.9%
Experimental Group	5.4%	16.2%	4.1%	58.1%	16.2%

## 5.2 Discussion

Based on the results presented in the previous sections, we discuss below the relevant issues regarding the effects of summary writing instruction on the subjects’

performance in the various tests in the present study.

### **5.2.1 Discussion of the Reliability of the Graders and the Questionnaire**

Before discussing the results of the subjects' performance on the GEPT writing task and the summary writing task, we need to first assess the reliability of the graders who were responsible for the grading of the two tasks. As reported in Section 5.1.1, the reliability of the three graders was quite high; therefore, they can be considered as showing no personal preferences and regarded as quite objective in assessing the performances of the subjects both in pretest and posttest. Their assessment of the subjects' English writing and summary writing tasks can also be regarded as having high consistency.

With respect to the reliability of the questionnaire designed for the present study, the results presented in 5.1.1 showed that the reliability was quite high (.7); therefore, the questionnaire can be seen as quite reliable. In other words, the questionnaire that was developed by the researcher in general served its purpose. With regard to the four factors (Confidence, Anxiety, Usefulness, and Preference), although the reliability was not entirely satisfactory, it was nonetheless acceptable to some degree. However, there does exist room for improvement in terms of the questionnaire items.

### 5.2.2 Discussion of the Chinese and English Summary Writing Scores

In this section, the discussion focuses on the results presented in Section 5.1.2. First of all, as shown in Table 5.1, the mean scores of the Chinese summary writing of the control group were 3.26, while those of the experimental group were 2.76, and the result met the .05 significance level ( $p < .05$ ). This finding shows that the control subjects were better than the experimental subjects in terms of their Chinese summary abilities. However, in the pretest English summary writing task, the mean scores of the control group were 1.8647 and those of the experimental group were 1.9730. As the statistics did not reach the acceptable significance level of .05, we can conclude that the experimental subjects and the control subjects showed no obvious differences in their English summative abilities before the treatment. By contrast, in the posttest English summary writing task, the mean scores of the control group were 1.5749 and those of the experimental group were 2.1216. The statistics did reach the acceptable significance level of .05, so it is reasonable to say that after the treatment, there were obvious differences between the English summary writing performances of the control subjects and those of the experimental subjects. The result shows that the summary writing instruction was effective in enhancing Taiwanese senior high school students' performances on the English summary writing tasks.

Secondly, the results in Table 5.2 show that the correlation coefficients between

the subjects' performances on the Chinese summary writing task and the pretest/posttest summary writing tasks did not show any significance at all. This seems to support the finding that the subjects' Chinese summative abilities had no significant impact on their English summative abilities. In other words, the subjects who were better in summarizing a Chinese text did not show clear advantage when they were asked to write an English summary. In other words, the study seems to show that those who are more proficient at writing a Chinese summary do not necessarily perform well in their English summary writing before the instruction of English summative skills. One possible explanation of this phenomenon might have something to do with the fact that Chinese is the participants' native language, which is naturally acquired. In contrast, English is a foreign language that they have learned in schools. Another potential factor might be that the rhetorical structure of English and that of Chinese are markedly different (Kaplan, 1983). Nevertheless, more research needs to be done to further investigate the relationships between Chinese summary writing and English summary writing.

### **5.2.3 Discussion of the Pretest and Posttest Scores**

In this section, the main focuses of the discussion are placed on the results of the pretest and posttest scores of both experimental and control group and the effects



of the summary writing instruction on the experimental subjects' reading and writing abilities.

To start with, as illustrated in Table 5.3, the p values of the pretest GEPT reading comprehension scores, the pretest GEPT writing scores and the pretest summary writing scores of the experimental and control groups showed no statistical significance. This indicates that the experimental group and the control group performed equally on the three tasks in the pretest. That is, the two groups were of similar proficiency level, and neither of the two groups was better than the other either in their reading abilities, writing abilities, or summative abilities.

However, as revealed in Table 5.4, the p values of the posttest GEPT reading scores, the posttest GEPT writing scores, and the posttest summary writing scores were very low; the differences between the experimental group and control group were significant. The results suggest that after the instruction of English summary writing techniques, the scores of the experimental and control subjects became significantly different. That is to say, after the treatment, the performances of the experimental group on reading comprehension, writing and even summary writing were quite different from those of the control group.

Secondly, for the purpose of further exploring the real changes of scores between the experimental and control groups, the mean scores and standard deviation

of the pretest/posttest GEPT reading comprehension tasks, GEPT writing tasks, and summary writing tasks were computed. The results shown in Table 5.5 suggest that both groups made progress in their reading comprehension abilities but the improvement of the experimental group was much greater than that of the control group. In addition, the findings in Table 5.6 and 5.7 further indicate that the control group exhibited worse performances in the posttest GEPT writing task and English summary writing task. This may be explained by the fact that as the posttest was held at the end of the first semester; all the participants were busy preparing for the final exam and the upcoming JCEE. The subjects in both groups were therefore under great pressure. Besides, as English summary writing was not a required test type in the JCEE English composition test, the subjects in the control group, who received no systematic instruction on summary writing, might show less interest in and therefore did not do their utmost in writing the second summary.. By contrast, the subjects in the experimental group showed better performances in the posttest GEPT writing task and summary writing task. To be brief, after receiving the instruction of summary writing techniques, the experimental subjects clearly outperformed the control group not only in the reading comprehension abilities and writing abilities, but also in their summative abilities. This supports the findings of Duke & Pearson (1985) and Amuchie (1983) that, after effective instruction of summary writing, not only

students' comprehension ability would become better, their summarization ability could be improved as well.

Thirdly, in order to further probe the relationships of the performances of the subjects in both groups, correlation coefficients among different tasks were also employed in the analysis. As indicated in Tables 5.8 and 5.9, the correlation coefficients among the GEPT reading, GEPT writing, and summary writing of the control group in the pretest and posttest showed statistical significance. This shows that the subjects in the control group whose reading comprehension abilities were good might have better performances on the GEPT writing tasks as well as their summary writing tasks, and vice versa. In other words, the control group subjects who did not write well in the GEPT writing tasks might have bad scores in the GEPT reading comprehension tasks and the summary writing tasks, and vice versa. This situation remained unchanged in the pretest and in the posttest.

On the other hand, from the correlation coefficients shown in Tables 5.10 & 5.11, different results are displayed. Originally, the correlation coefficients between the GEPT writing and summary writing in the pretest were 0.154 and were not significant at all. However, after the treatment, the correlation coefficients between the GEPT writing and summary writing were 0.336 and became statistically significant. The findings indicate that before the instruction of the English summative

techniques, the GEPT writing scores of the subjects in the experimental group were not directly relevant to their summary writing scores. While, after the effective instruction of summary writing, the experimental subjects who performed better in the GEPT writing tasks also had better performance in the summary writing tasks.

#### **5.2.4 Discussion of the JCEE Composition Scores**

In order to investigate the effect of the summary writing instruction on the subjects' JCEE composition scores, we compared the mean scores of both groups, as shown in Table 5.12. It shows that the experimental group did get better scores in the JCEE compositions, though not yet achieving the acceptable significance level of 0.05. This might have much to do with the length of the treatment. Thus, if the experiment could extend to more than a whole semester, the subjects might have much better performances in their JCEE composition tasks.

Second, the results in Tables 5.13 & 5.14 show that the correlation coefficients of the control group between the pretest/posttest English summary writing tasks and the JCEE composition scores were statistically significant. That is, the control group subjects who performed well in the summary writing tasks might have better scores in the JCEE composition tasks, and those control group subjects who received poor grades in the summary writing tasks might have bad performances in the JCEE

composition tasks.

Third, as shown in Tables 5.15 and 5.16, the experimental group exhibited different results. In the pretest, the correlation coefficients between summary writing and JCEE composition scores were 0.138 and it was non-significant. In other words, before the instruction of English summative techniques, the summary writing scores of the experimental group were not directly relevant to their JCEE composition scores. By contrast, in the posttest, the correlation coefficients between the summary writing and JCEE composition scores were 0.355 and this turned out to be statistically significant. Therefore it is possible that after receiving the instruction of the English summative techniques, the experimental group subjects might have performed better in the JCEE composition tasks.

### **5.2.5 Discussion of the Responses to the Pretest and Posttest Questionnaires**

Based on the results obtained from the subjects' responses to the questionnaires, several conclusions can be drawn. First, in order to investigate whether the subjects held apparently different attitudes toward the four factors (Confidence, Anxiety, Usefulness, and Preference), a Chi-square test was computed. The results in Table 5.17 indicate that the experimental group and the control group showed no obvious differences in their attitudes with regard to these four factors, because the p values in

the pretest and posttest did not reach the acceptable significance level of .05. The reasons why there were no obvious differences regarding these four factors might be that the changes of the attitude toward one factor were not significant enough, even if there were some minor changes. Another possible factor is that the time of the treatment was not long enough to change the subjects' attitudes in a significant way.

Although the comparison of the attitude changes toward the above-mentioned four factors showed no statistical significance, it is necessary to further explore the subjects' attitudes toward each individual question in the questionnaires. Based on the data shown in Table 5.18, the experimental group and the control group showed no significant differences in the pretest questionnaire but in the posttest questionnaire, the experimental group and the control group did show statistical significance in some of the questions (Q2, Q5, Q10, Q11, Q12, and Q18).

By comparing the percentages obtained from the Frequency Table, several conclusions can be made. First, as shown in Table 5.19, most of the subjects in both groups agreed or strongly agreed with the statement "I will make the best use of every opportunity to learn to write English summaries." This supports the necessity of summary writing instruction mentioned in the literature review in Section 2.3.

Secondly, the findings in Table 5.20 show that a great majority of the experimental group subjects would like to spend their free time practicing summary

writing outside the classroom, while most of the control subjects responded with “no comment” to the statement “I would like to spend my free time practicing summary writing outside the classroom.” In other words, after the treatment, the experimental group subjects show willingness to practice summary writing even in their free time.

Thirdly, as shown in Table 5.21, a sizable percentage of the control group subjects again responded with “no comment” to the statement “I will delete the repeated or unimportant sentences of the passage first, when I write an English summary.” In contrast, more than three quarters of the experimental group subjects preferred or strongly preferred to apply the rules of deletion when they were told to write English summaries after they received the instruction of summary writing techniques.

Moreover, Table 5.22 indicates that nearly half of the control group subjects responded with “no comment” to the statement “If I have a choice, I would prefer not to write an English summary.” However, nearly half of the experimental group subjects disagreed or strongly disagreed with the statement. Namely, after the treatment, the experimental subjects tended to welcome the chances of writing an English summary.

In addition, as revealed in Table 5.23, nearly half of the control group subjects responded with “no comment” regarding the statement “Learning how to write an

English summary is helpful to my learning of English.” Conversely, a majority of the experimental group subjects agreed or strongly agreed with the statement. Specifically, after receiving the instruction of English summative techniques, most of the experimental subjects felt the techniques helpful to their learning of English.

Last but not least, the results in Table 5.24 show that a great majority of the subjects in both groups agreed or strongly agreed that they would look through the text carefully from the very beginning before starting to write an English summary. In other words, they believe through careful reading of the text they can find important clues to help them in writing summaries.

### **5.3 Summary**

In this chapter, the results of this research have been presented in order to investigate the effects of English summary writing instruction on the reading and writing abilities of senior high school students here in Taiwan. The relationships between the students’ Chinese and English summary abilities were described and it was found that students’ ability in writing Chinese summaries might have little to do with their English summary writing ability.

Besides, the subjects’ scores of the pretest/ posttest GEPT reading comprehension tasks, GEPT writing tasks, and summary writing tasks were compared



and analyzed to investigate the impact of summary writing instruction. We come to a tentative conclusion that after receiving the instruction of summary writing techniques, the experimental group subjects seemed to have made progress in their GEPT reading comprehension task, GEPT writing task and summary writing task. Moreover, the performances of the experimental group were better than those of the control group in the above-mentioned three tasks.

In addition, the students' JCEE composition scores were also examined in order to see whether the instruction on English summary writing had exerted some impact. Although the evidence is far from conclusive, it is believed that the teaching of summary writing techniques can better improve the students' performances on JCEE composition task if the treatment time is extended.

Lastly, the results of the subjects' responses toward the pretest/posttest questionnaire have also been examined so as to explore whether there are positive changes of attitudes toward the descriptions specified in the questionnaire. The general finding is that the experimental group subjects showed more positive changes of attitude toward the teaching and learning of summary writing.