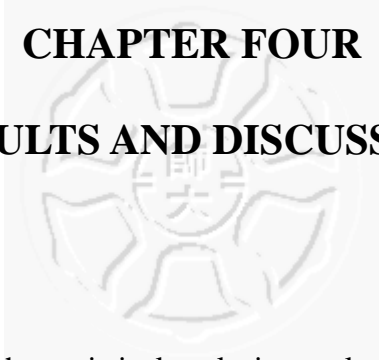


## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**



This chapter describes the statistical analysis, results, and discussion of the data gathered from the experiments presented in Chapter Three, which scrutinize the effects of pre-reading questions and previewing on Taiwanese EFL senior high school students' reading comprehension of American short stories. The findings are discussed based on the five research questions brought up in Chapter One. First, the differences among the three groups, the Control Group, the Pre-reading-question Group, and the Previewing Group, are pointed out. Then, the differences between the Control Group and the Pre-reading-question Group are drawn out from the scores of the written recall protocols. Third, the differences between the Control Group and the Previewing Group are examined, also from the scores of the written recall protocols. Fourth, a comparison is made between the Pre-reading-question Group and the Previewing Group in order to see which treatment benefits the learners more. Last, the subjects' attitudes toward the reading experiments are found out by their responses to the questionnaires.

The data collected in this study were analyzed quantitatively. The mean scores of the written recall of the three American short stories as well as those of the subjects' responses to the items in the questionnaire were examined in a quantitative way.

Before answering the five research questions, the subjects' answers to Item 1 (Did you read this story before?) in the questionnaire was analyzed first to check if any of the students read any of the three short stories before so that the scores of the

subjects' written recall could be analyzed. The results of the subjects' responses to Item 1 are sketched out in Table 10.

Table 10. The Subjects' Responses to Item 1

Item 1: Did you read this story before?

Group	N	Yes	No
<i>Story 1: The Story of an Hour</i>			
CG	41	0%	100%
PQ	40	0%	100%
PV	43	0%	100%
<i>Story 2: Gifts of Love</i>			
CG	41	0%	100%
PQ	40	0%	100%
PV	43	0%	100%
<i>Story 3: Going Home</i>			
CG	41	0%	100%
PQ	40	0%	100%
PV	43	0%	100%

Note. CG = Control Group

PQ = Pre-reading-question Group

PV = Previewing Group

As Table 10 indicates, none of the subjects in the three groups read any of the three short stories before. Therefore, all the data gathered in this present study were valid and could be analyzed and compared.

### **Effects of Pre-reading Questions and Previewing on Reading Comprehension**

Research Question 1: Are there any differences among the three groups, that is the

Control Group, the Pre-reading-question Group, and the

Previewing Group, in reading comprehension as indicated by the results of recall?

One-Way ANOVA was used to analyze the overall scores of the subjects' written recall and to examine whether there existed significant differences among the three groups—the Control Group (CG), the Pre-reading-question Group (PQ), and the Previewing Group (PV) on reading comprehension of three American short stories. The findings (see Table 11) showed that the differences reached a significant level in the overall scores of the three short stories ( $F = 28.802, p = .000 < .05$ ). By the aid of the computational analysis of One-Way ANOVA, the result of the overall performance on story reading comprehension for the three groups indicated that there were significant differences among the three groups.

Table 11. The Subjects' Overall Reading Comprehension Performance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14148.298	2	7074.149	28.802	.000*
Within Groups	29719.694	121	245.617		
Total	43867.992	123			

\* $p < .05$

### Results of Pre-reading Questions on Reading Comprehension

The post-hoc tests were conducted to further scrutinize if there were significant differences in the pair comparisons (CG vs. PQ, CG vs. PV, and PQ vs. PV) and to answer Research Question 2 to 4.

Research Question 2: Do pre-reading questions facilitate Taiwanese senior high

school students' reading comprehension as indicated by the results of recall?

Scheffe was further employed to examine the comparison of CG and PQ on the reading comprehension. The result (see Table 12) indicated that there was significant difference between CG and PQ on their reading comprehension of the three American short stories ( $p = .037$ ), and the result reached a significant level ( $p < .05$ ). Therefore, providing pre-reading questions for students at the pre-reading stage indeed facilitated their reading comprehension.

Table 12. Comparison of the Result between CG and PQ on Reading Comprehension

group	group	Mean Difference	Std. Error	Sig.
CG	PQ	-9.05323*	3.48297	.037*

\* $p < .05$

CG = Control Group

PQ = Pre-reading-question Group

As illustrated in Table 12, the result of post-hoc tests showed that there was significant difference between CG and PQ in the subjects' overall reading comprehension of the three stories. From Table 12, the mean difference of the written recall on the three short stories between the CG and the PQ pointed out that the subjects who were provided with pre-reading questions before reading outperformed those who did not experience pre-reading activities by 9.05323. The mean difference between the two groups on the overall reading performance showed that pre-reading questions did help readers improve their reading comprehension, and the statistical finding between the two groups also reached a significant level, which was consistent with the findings of other studies (Grellet, 1981; Heilman, Blair, &

Rupley, 1990; Pan, 2003; Reutzel, 1985). The results confirmed the positive effectiveness of the employment of pre-reading questions.

In this study, although the subjects in PQ were supplied with only three pre-reading questions prior to an assigned story, the effect of pre-reading questions was obviously better than that of no pre-reading guide. Some researchers emphasized the importance of pre-reading guides (Britton et al., 1985; Nolte & Singer, 1985) because background knowledge plays an essential role in reading comprehension. The use of pre-reading questions can be regarded as the retrieval of prior knowledge and the more information the readers can retrieve, the more they comprehend. Because of the aid of pre-reading questions, the subjects in PQ could get higher scores than those in CG.

### **Results of Previewing on Reading Comprehension**

Research Question 3: Does previewing facilitate Taiwanese senior high school students' reading comprehension as indicated by the results of recall?

Scheffe was conducted again to inspect the comparison of CG and PV on the overall reading comprehension of the three short stories. The result (see Table 13) showed that there was significant difference between CG and PV on their overall reading comprehension of the three American short stories ( $p = .000$ ). From the finding, a conclusion could be drawn that supplying students with previewing before they read a short story did facilitate the readers' reading comprehension.

Table 13. Comparison of the Result between CG and PV on Reading Comprehension

group	group	Mean Difference	Std. Error	Sig.
CG	PV	-25.55678*	3.42092	.000*

\* $p < .05$

CG = Control Group

PV = Previewing Group

As shown in Table 13, the outcome of the written recall on the overall scores of the three short stories between PV and CG indicated that the group with previewing in front of reading scored much better than the group without previewing or any pre-reading activities before reading. The difference of the mean total scores between the two groups on the three stories was found to be highly significant. The participants in PV scored much more than those in CG by 25.55678 on the three short stories. The result suggested that the provision of previewing significantly facilitated readers' reading comprehension. This finding was in accordance with the results reported by a number of previous studies verifying the role of previewing as a helper on reading comprehension (Chen & Graves, 1995; Graves & Cooke, 1980; Graves, Cooke, & LaBerge, 1983; Graves & Palmer, 1981; Huang, 2003; Neuman, 1988).

Prior topical knowledge about the content of a reading text has always been proved as an essential prerequisite for better understanding and performance on the subsequent cloze tests, recall, or multiple-choice comprehension tests for L1 readers as well as L2 readers (Aron, 1986; Carrell, 1987; Johnson, 1981; Johnson, 1982; Lipson, 1982; Lipson, 1983; Nelson, 1987; Pritchard, 1990; Sasaki, 2000; Stevens, 1980). In this present study, previewing revealed specific information concerning the contents of a story and prepared the subjects for the upcoming story; as a result,

the subjects had less new information to deal with (Graces & Palmer, 1981). For this reason, previewing not only provides the subjects with new and direct information but also lowers the reading load and thus increases readers' reading comprehension.

### **Comparison between Pre-reading Questions and Previewing on Reading Comprehension**

Research Question 4: Which pre-reading activity is more helpful to Taiwanese senior high school students' reading comprehension, pre-reading questions or previewing?

Scheffe was again used to scrutinize which of the two treatments, pre-reading questions or previewing, was more useful to Taiwanese senior high school students' reading comprehension on the three American short stories. The outcome (see Table 14) showed that there was significant difference between PQ and PV on their overall reading comprehension of the three short stories ( $p = .000$ ), and the result reached a significant level ( $p < .05$ ). As a result, providing previewing for students at the pre-reading stage generated better results on their reading comprehension than offering them pre-reading questions.

Table 14. Comparison of the Result between PQ and PV on Reading Comprehension

group	group	Mean Difference	Std. Error	Sig.
PQ	PV	-16.50355*	3.44274	.000*

\* $p < .05$

PQ = Pre-reading-question Group

PV = Previewing Group

As noted in Table 14, the results of the overall performance of the written recall

on the three short stories between PQ and PV suggested that the group with previewing prior to reading scored much higher than the group with pre-reading questions before reading. The outcome demonstrated that the difference of the mean total scores between the two groups on the three stories was found to be significant, with higher mean score in PV, 16.50355, which implied that the provision of previewing significantly facilitated readers' reading comprehension.

This finding was in accordance with the positive effect of previewing on reading comprehension reported by other previous studies, such as Chen & Graves, 1995; Graves & Cooke, 1980; Graves, Cooke, & LaBerge, 1983; Graves & Palmer, 1981; Huang, 2003; and Neuman, 1988. Although pre-reading questions, based on other findings (Grellet, 1981; Heilman, Blair, & Rupley, 1990; Pan, 2003; Reutzel, 1985), were also helpful to readers' reading comprehension, they did not yield better results than previewing in this present study. From the finding in the study, the employment of previewing prior to reading was more helpful to Taiwanese senior high school students' reading comprehension.

### **Subjects' Attitudes toward the Stories and the Pre-reading Activities**

Research Question 5: What are Taiwanese senior high school students' attitudes toward the two pre-reading activities, that is, pre-reading questions and previewing?

There were two parts in the questionnaire. The first part included two items, asking about the subjects' opinions on the three American short stories. The second part was especially designed for subjects in the two experimental groups, PQ and PV. The four items that participants in each group got were appropriately worded according to the treatment they got (see Appendix F, G, and H). Each item in the questionnaire was designed by using a five-point Likert scale, 5 (strongly agree), 4



(agree), 3 (neutral), 2 (disagree), and 1 (strongly disagree) except for Item 1, which was a yes-no question.

### *Subjects' Opinions on the Three Stories*

All of the participants in the three groups answered Item 1 and Item 2. The students' responses to the two items helped the researcher to know whether the subjects read the three short stories before as well as whether they enjoyed reading the stories or not. The outcomes are shown in Table 10 (shown in the beginning of this chapter on p.45) and Table 15.

Table 15. The Subjects' Response to Item 2: Do you enjoy reading this story?

Story	Group	SA (5)	A (4)	N (3)	D (2)	SD (1)	Mean
1	CG	4.9%	48.8%	43.9%	2.4%	0%	3.26
	PQ	2.5%	47.5%	37.5%	12.5%	0%	3.40
	PV	4.7%	46.5%	25.6%	16.3%	7%	3.56
2	CG	12.2%	51.2%	36.6%	0%	0%	3.76
	PQ	27.5%	47.5%	25%	0%	0%	3.81
	PV	25.6%	39.5%	30.2%	0%	4.7%	4.03
3	CG	9.8%	41.5%	36.6%	12.2%	0%	3.49
	PQ	12.5%	42.5%	35%	10%	0%	3.58
	PV	16.3%	51.2%	25.6%	4.7%	2.3%	3.74

Note. CG = Control Group, PQ = Pre-reading-question Group, PV = Previewing Group, SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree

The responses to Item 2 were presented in percentage and mean scores. Table

15 shows the means and percentage to each scale of the results of Item 2 in the questionnaire. From this table, the means of the three groups for Story 1 were 3.26, 3.40, and 3.56 respectively. The means of the three groups for Story 2 were 3.76, 3.81, and 4.03 respectively, and the means of the three groups for Story 3 were 3.49, 3.58, and 3.74 respectively. Generally speaking, the results showed that subjects tended to enjoy reading these three stories. From the Personal Data Sheet presented in Chapter Three (pp. 29-31), although the subjects were not active learners in English and more than half of the subjects expressed that they did not like to read English short stories, at least after the experiments, the participants found reading English stories moderately enjoyable and were more interested in reading English short stories than before. Just as Goodman (1967) concluded, although English reading is a heavy duty, it is an interesting and enjoyable psychological guessing game.

#### *Subjects' Opinions on Pre-reading Questions*

In this section, only the subjects in PQ answered Item 3 to Item 6. Participants in PQ answered four items about their opinions on the employment of pre-reading questions. These four items helped the researcher to understand the subjects' reflections on the effectiveness of pre-reading questions. The results of questionnaires for PQ on the three stories were combined and presented in Table 16.

Table 16. The Subjects' Responses to Item 3 to Item 6 in PQ

Item	SA	A	N	D	SD
3. The pre-reading questions help improve overall reading comprehension.	12.5%	52.5%	27.5%	7.5%	0%
4. The pre-reading questions help anticipate the content of the upcoming story.	7.5%	60%	25%	7.5%	0%
5. I enjoy reading the pre-reading questions.	5%	47.5%	42.5%	5%	0%
6. I hope there will be pre-reading questions before every reading.	12.5%	47.5%	35%	5%	0%

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree

As reflected in Table 16, 65% of the subjects (12.5% +52.5%) in PQ expressed that they agreed that pre-reading questions improved their overall reading comprehension on the three short stories. As for their responses to Item 4, 67.5% of the students (7.5% + 60%) had a positive attitude toward this item that the pre-reading questions helped them anticipate the content of the upcoming story. As to the results of Item 5, 52.5% of the participants (5% + 47.5%) found it enjoyable to read the pre-reading questions for the three short stories. As for the last item, Item 6, 60%

of the students (12.5% + 47.5%) expected that there would be pre-reading questions before every reading.

In sum, from the participants' responses to Item 3 to Item 6 in the questionnaire, the subjects in PQ generally took positive attitudes toward the employment of pre-reading questions before a reading selection. They moderately agreed that they liked reading the pre-reading questions and the pre-reading questions helped to anticipate the content of the about-to-read stories and enhance overall reading comprehension. Consequently, they hoped that there would be pre-reading questions prior to reading in the future.

#### *Subjects' Opinions on Previewing*

In this section, only the subjects in PV answered Item 3 to Item 6. Participants in PV responded to these four items about their attitudes toward the use of previewing. These four items helped the researcher to understand the subjects' reflections on the effectiveness of previewing. The results of questionnaires for PV on the three short stories were combined and presented in Table 17.

As reflected in Table 17, the results of Item 3 showed that 67.4% of the subjects (9.3% + 58.1%) in PV consented the positive effect of previewing on their overall reading comprehension of the three short stories. As for Item 4, which asked if previewing aided in their anticipation of the content of the incoming story, 72.1% of the subjects (4.7% + 67.4%) believed that previewing was useful and helpful to them in guessing the story lines of the incoming story. As far as the enjoyment of reading each previewing before each story as indicated in Item 5, 62.8% of the subjects (7% + 55.8%) found it enjoyable to read the previewing for each story. As to the last item, Item 6, 72.1% of the students (9.3% + 62.8%) hoped that there would be previewing before every reading.

Table 17. The Subjects' Responses to Item 3 to Item 6 in PV

Item	SA	A	N	D	SD
3. The previewing helps improve overall reading comprehension.	9.3%	58.1%	27.9%	4.7%	0%
4. The previewing helps anticipate the content of the upcoming story.	4.7%	67.4%	25.6%	2.3%	0%
5. I enjoy reading the previewing.	7%	55.8%	32.6%	2.3%	2.3%
6. I hope there will be previewing before every reading.	9.3%	62.8%	25.6%	0%	2.3%

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree

To sum up, from the subjects' feedback to Item 3 to Item 6 in the questionnaire, more than half of the subjects in PV had positive attitudes toward the employment of previewing prior to a reading selection. They concurred that they liked reading the previewing and they believed that the previewing helped to anticipate the content of the about-to-read stories and thus improved overall reading comprehension. As a result, they expected that there would be previewing before reading in the future.