CHAPTER THREE

METHODOLOGY

To learn the effects of note-taking on understanding English passages or dialogues by listening to the same content several times, the researcher utilized statistical methods with SPSS to analyze the collected data. Moreover, quantitative research methods were adopted to describe the results of personal profiles and the feedback questionnaire. The first section presents the description of the subjects. The second part introduces the instrumentation in the experiment. The third part lists the procedures how to carry out the research.

Subjects

The subjects involved in the study were two intact classes of the juniors instructed by the researcher in a junior high school. One class with 36 students acted as a control group who were asked to fill in the personal profile and feedback questionnaires and to take the pretest, listening tests and posttest. During the period of the experiment, one girl transferred to another school. Therefore, at the end of the experiment, the control class consisted of 35 students. The other class with 35 students, served as an experiment group. Besides being asked to finish the same tasks as the students in the control class, the students in the experiment class were also asked to take notes while taking listening tests. Both the experiment and control classes were considered homogeneous because of the following three reasons. First,

they were equally placed into two classes with an s-type distribution in accordance with the scores in elementary school. Secondly, they had been taught English by the researcher since they entered junior high school. Thirdly, there was no significant difference in their English proficiency in terms of the results of the pretest held in mid-October in 2002. Table 3-1 reveals the results of the comparison of the pretest between the experiment and control classes. The p-value in Independent Samples Test is .144, which is higher than .05 (The significance level is set at p-value < .05 through the whole study). That is, as far as subjects' English proficiency level is concerned, the experiment and the control classes were not significantly different.

Table 3-1 Results of Pretest of the Two Classes

Class	N	Mean Score	T	Sig.
Experiment	35	60.86	1.479	.144
Control	30	52.33		

In addition to examining if the two classes were homogeneous, the pretest also functioned as a criterion for the researcher to divide each class into different proficiency groups. Based on the scores, each class was divided into two levels – high and low proficiency. The criterion for grouping was similar to that of GEPT (General English Proficiency Test, is a systematic and standardized test, developed by Language Training and Testing Center in Taiwan). The standard for passing listening comprehension in GEPT is 80 out of 120. Thus, 18 subjects in the experiment class who got 60 or above based on the pretest were placed in a high proficiency group and

the other 17 (below 60) in a low proficiency group. In the control class, 16 subjects were placed as a high proficiency group while the other 19 in a low proficiency group. Table 3-2 shows the distribution of each group in the experiment and control classes.

Table 3-2 Distributions of Proficiency Levels

Class	Experiment		Control	
Group	High	Low	High	Low
Number	18	17	16	19
Percentage	51%	49%	46%	54%

As for the personal profile, before the experiment, the subjects were asked to fill out a personal profile questionnaire (Appendix A). The results are showed in the following Tables (Question 7 is showed in Chapter 4.)

Table 3-3 shows how many years the subjects have learned English before the experiment. In the experiment class, 54% of the subjects had learned English for 2 years, 26% for 3 years and 20% for 4 years. On the average, they had learned English for 2.7 years before the experiment. In the control class, 46% of the subjects had learned English for 2 years, 31% for 3 years, 17% for 4 years and 3% for 5 years. On the average, they had learned English for 2.8 years. This showed most of the subjects started learning English in junior high school.

Table 3-3 Years of Learning English Before the Experiment

Class	Experiment (N=35)			Control (N=35)			
Year	2	3	4	2	3	4	5
T	19	9	7	16	11	6	1
TP	54%	26%	20%	46%	31%	17%	3%
Missing	0			1			

Note. T = Total Number; TP = Total Percentage

The question aimed to understand how the subjects learned English after school. As shown in Table 3-4, 11% of the participants in the experiment class did not study English after school. Forty-six percent of them learned English by themselves. Twenty-four percent of them went to cram schools to learn English.

In the control class, 25% of the participants did not study English after school. Forty percent of them studied English by themselves. Twenty-eight percent went to cram schools after regular school.

Concluded from the table, more than a half of the subjects studied English by themselves or did not study English at all after school.

Table 3-4 Ways of Learning English After School

	Experiment		Control	
	T	TP	T	TP
No English learning activity	5	11%	10	25%
Studying by themselves	21	46%	16	40%
Attending cram school	11	24%	11	28%
Tutor	2	4%	0	0
Listening to radio programs	1	2%	1	3%
Watching TV programs	4	9%	1	3%
Others	2	4%	1	3%

Note. The subjects were allowed to choose 2 or more answers on each question.

T=Total number; TP= Total Percentage

The question was designed to know if the factor that the time per week the subjects spent in listening practice after school would affect the results of the study. As indicated in Table 3-5, in both experiment and control classes, more than 80% of the respondents spent less than one hour per week in listening practice. Coincidently, 3% and 12% of the respondents in each class spent about two and three hours per week in listening practice. It seemed that the subjects lacked the motivation to increase their listening ability actively and did not know how to polish their listening competence.

Table 3-5 Hours Spent per Week in Listening Practice After School

Class	Experiment (N=35)				Control (N=35)			
Hours	0	1	2	3	0	1	2	3
T	18	12	1	4	19	10	1	4
TP	51%	34%	3%	12%	54%	29%	3%	12%
Missing	0				1			

Table 3-6 illustrates how the subjects showed an eagerness to learn English. Fifty-one percent of the subjects in the control class enjoyed learning English while only 31% of the subjects in the experiment class did. Such phenomenon might be due to the fact that as their class advisor, the researcher was so strict with the experiment class that the subjects in the experiment class did not like to learn English as much as the subjects in the control class did.

Table 3-6 Attitude Toward English Learning

Class	Experiment (N=35)		Control (N=35)	
Attitude	Like English	Dislike English	Like English	Dislike English
T	11	24	16	18
TP	31%	69%	46%	51%
Missing	0		1	

Table 3-7 reveals how the subjects evaluated their listening ability. The table helps to define that 54% of the participants in each class thought their listening ability was the poorest among four skills (listening, speaking, reading and writing). Approximately 10% of the participants in each class ranked their listening ability highest. Obviously, over a half of the subjects were not satisfied with their listening ability.

Table 3-7 Rank of Listening Ability Among Four Skills

Class	Experiment (N=35)				Control (N=35)			
Rank	4	3	2	1	4	3	2	1
T	3	7	6	19	4	7	4	19
TP	9%	20%	17%	54%	11%	20%	11%	54%
Missing	0				1			

Note. Rank from 4 to 1 means from the highest to the lowest.

Table 3-8 tries to know if the subjects would like to improve their listening comprehension. It showed that 54% of the subjects in the experiment class were eager to improve their listening comprehension. However, only 46% of the subjects in the control class would like to improve their listening comprehension. Furthermore, in contrast with Table 3-6, “Attitude toward English learning” (only 31% of the subjects in the experiment class indicated that they liked learning English), Table 3-8 reveals that about 23% (54% - 31% = 23%) of the subjects in the experiment class still desired to increase their listening ability even though they did not like English learning. However, with regard to the control class, the result of Table 3-8 was consistent with that of Table 3-6: 46% of the subjects liked to learn English and 46% of them had a desire to improve their listening comprehension. This could be related to the subjects’ motivation. Thus, during the experiment, the researcher had to encourage the subjects to improve their listening ability with the experiment.

Table 3-8 Desire to Improve Listening Competence

Class	Experiment (N=35)		Control (N=35)	
Desire	Yes	No	Yes	No
T	19	16	16	18
TP	54%	46%	46%	51%
Missing	0		1	

Table 3-9 shows how the subjects thought what hindered their listening comprehension most. In the experiment class, the table illustrates that 34% of the participants considered their poor English ability the primary factor hindering their listening comprehension. In the control class, the subjects thought what hindered their listening comprehension most. As the table indicates, 44% of the subjects in the control class considered their poor English ability the primary factor hindering them from listening well. This implied that about one third of the subjects thought they would improve their English listening comprehension if they improved their English ability.

Table 3-9 Primary Factor Hindering Listening Comprehension

	Experiment		Control	
Factor	T	TP	T	TP
Poor English ability	12	34%	15	44%
Distraction	0	0	0	0
Forgetfulness	3	9%	1	3%
Trying to catch each word and thus missing the message that follows	4	11%	3	9%
Not having the habit of writing down key words	1	3%	0	0
Not having the habit of predicting	2	6%	0	0
Not knowing how to catch the main idea	3	9%	0	0
Not knowing the differences between spoken and written languages	5	13%	0	0
Different accents by different speakers	1	3%	4	12%
Speed	2	6%	7	20%
Not knowing how to deal with noise and redundancy	0	0	0	0
No repetition	1	3%	2	6%
Others	1	3%	2	6%

Note. One subject in the control class did not answer the question.

This question was designed to know how to help students improve their listening comprehension. Table 3-10 shows that 49% of the respondents in the experiment class hoped to improve their listening ability through the teacher's explanation after each listening test, and 43% of them through knowing the differences between spoken and written languages. In the control class, 44% of the respondents hoped to improve their listening ability through the researcher's explanation after every listening test, and 32% of them through distinguishing the differences between spoken and written languages. As indicated above, almost a half of the subjects hoped that the researcher could help them understand the listening content and the differences between spoken and written languages.

Table 3-10 The Best Way of Instruction to Improve Listening Comprehension

	Experiment		Control	
Choice	T	TP	T	TP
To know different accents	2	6%	6	18%
To know the differences between written and spoken languages	15	43%	11	32%
To listen to the teacher's explanation of the content	17	49%	15	44%
Others	1	2%	2	6%

As showed from Tables 3-3 to 3-10, both experiment and control classes had six similarities. (1) Almost 80% of the subjects had learned English for two or three years. (2) Of all the subjects, about 60% did not learn English or study English by

themselves after school. (3) Over 80% of the subjects spent less than one hour per week engaging in listening practice after school. Three percent of them spent about two hours and 12% spent three hours in listening practice. (4) About 50% of them ranked their listening ability lowest of the four skills. (5) Close to 50% of the students would like to upgrade their listening competence. (6) The primary factor hindering subjects from listening well was the subjects' poor English ability.

The experiment class differed from the control class in two ways: (1) In the affection domain, only 31% of the subjects in the experiment class liked to learn English. However, in the control class, 46% of them liked it, and (2) as to the best way of instruction for the subjects to improve their listening ability, in the experiment class, 92% of the experiment class hoped that the instructor's explanation and the schema of knowing the differences between spoken and written languages could help them improve their listening ability. However, only 76% of the control class hoped so. That is, their opinions were more divided than the subjects in the experiment class.

Instrumentation

The instruments applied in the research included the materials (the contents of nine units of listening tests, the pretest and the posttest), the contents of the tapes, the personal profile, the feedback questionnaire, the pretest and the posttest.

Materials

The materials included the contents of nine units of listening tests, the pretest and the posttest. To avoid disturbing the normal teaching schedule, the researcher

extracted the materials from the listening training book[1]. There were five reasons for adopting the listening training book: (1) The listening training book was based on the textbook. Therefore, students understood beforehand that the listening content was related to the textbook and thus would not give them additional learning burden. The researcher could also conduct the experiment with the school schedule. (2) Of all the fifty dialogues or passages adopted from the listening training book, twenty-six belonged to the average speech speed (160-190 wpm) and twenty-one to the moderately slow (130-160wpm) based on the levels set up by Rivers (1981). (3) Most of the test items were presented in the form of multiple choices so as to reduce test takers' uneasiness. (4) The options in multiple choices were short and simple. Moreover, the test style which belonged to either dialogues or short passages was regarded by the subjects in this study as the most difficult test style for the subjects (mentioned in Table 4-1, 88% of the subjects viewed " Selecting an optimal choice from a dialogue or a passage" as the toughest test style). (5) The subjects were familiar with the listening training book because they had used it since they entered junior high school. In addition, the audiotape was recorded by the same speakers. Therefore, the subjects did not have to worry about hearing different accents.

As for the worksheets of the nine units of listening tests**,** the multiple-choice questions and the answering columns were showed on the paper. In addition, the space for note-taking was designed for the experiment class.

The Contents of the Tape

The contents of the tape were extracted from the tapes of the listening training

[1]The listening training book, "English Comprehension for Junior High School", was compiled by Li-shin Jan and Shin-rung Li in 2001. It was published by Kan-shiuan Publisher, Taiwan, ROC.

book. Each extract was repeated twice at a time to save the time of rewinding. Each tape was compiled including the pretest (The details of the test are in Appendix C), nine units of listening materials (see Appendix D1 and D2) and the posttest (see Appendix E).

The Personal Profile Questionnaire

The personal profile questionnaire (see Appendix A) was printed in Chinese so as to make sure the students' full understanding of the questions. It was modified from Teng's (1997) to serve two purposes. One (from Questions 1 to 6) aimed to explore the factors that might affect the research and the students' affection domain. The questions included: (1) years of learning English; (2) ways of learning English after school; (3) hours spent per week in English listening after school; (4) attitude toward English learning; (5) rank of listening ability among four skills, and (6) the desire to improve listening competence. The other (from Questions 7 to 9) aimed to understand whether the subjects were really weak in comprehending a dialogue or a passage; what the main variable stopping them from listening well was and how they would like to increase their listening ability. The questions involved: (1) the most difficult test style; (2) the primary factor hindering listening comprehension, and (3) the best way to improve listening comprehension. The results were explained in Chapter 3 except Question 7 was in Chapter 4.

The Feedback Questionnaire

The feedback questionnaire was printed in Chinese so as to make sure the students' full understanding of the questions. It was designed by the researcher to elicit students' reflections on the value of this study. The contents of the questionnaire

were based on the literature review in Chapter 2.Therefore, the feedback questionnaire (see Appendix B) provided the statements of the subjects' affection domain and offered some pedagogical implications in this study. The first question aimed to know that what the most useful way among pre-listening activities is. The options included knowing the differences of accents between the researcher and the speakers in the tape, knowing the linking sounds in the tape and knowing the differences between spoken and written languages and the teacher's explanation of the content after a listening test. The second question was designed to understand what the least useful way among pre-listening activities. The options were the same as those of the first question. The last question aimed to know what the first three improved aspects were after the experiment. The options included: (1) improving his/her listening ability; (2) listening without distraction; (3) catching the main idea; (4) acquiring a habit of writing down key words; (5) building up a habit of predicting the coming message; (6) comprehending the content; (7) knowing the differences between spoken and written languages; (8) identifying different accents from the instructor; (9) being able to follow the speed of the speakers, and (10) ignoring noise easily.

Pretest

The pretest (see Appendix C) aimed to check if the two classes were homogeneous and aimed to divide the subjects into two groups – high and low proficiency according to the traditional standard – equal to or above scores of 60 out of 100 and below 60. The pretest was composed of ten dialogues from 1.6 and 2.6 in the listening training book.

Posttest

The posttest (see Appendix E) was designed to compare with the pretest to explore the research questions.

Table 3-11 is a summary of the instrumentation and the related purposes.

Table 3-11 Instruments and Purposes

No.	Instrument	Purpose
1.	Personal Profile Questionnaire (Appendix A)	To understand the subjects' learning conditions and to explore the factors that may affect the experiment.
2.	Pretest (Appendix C)	To understand the subjects' proficiency levels and to compare them with the posttest in performance.
3.	Worksheets (Appendix D1 and D2)	The pre-listening instruction was for controlling the variables except the note-taking strategy.
4.	Posttest (Appendix E)	To obtain the results of the experiment and to compare them with the pretest.
5.	Feedback Questionnaire (Appendix B)	To understand the subjects' feelings about the experiment.

Procedures

The procedures of this study were explained as follows.

All of the experiment was conducted in the classroom because there was no

language laboratory in the school.

Before carrying out the experiment, the researcher designed a personal profile questionnaire to obtain the information that might affect this research. Then, the researcher required subjects to take a pretest to identify the subjects' proficiency. After that, the researcher asked the subjects to fill out the personal profile questionnaire including the factors that may affect the results of the experiment. The analysis was described in Chapter 4.

Subsequently, the researcher conducted nine units of listening tests between mid-October in 2002 and the beginning of March in 2003. Each listening activity lasted forty-five minutes (one class session) after each lesson was taught. Each class session included a pre-listening instruction, while-listening, scoring and post-listening.

In terms of the pre-listening instruction, Dunkel (1986) suggested four steps for a listening teaching instruction: (1) to ask students to guess what they will hear in pre-listening; (2) to ask students to listen actively in while-listening; (3) to ask students to choose relevant and non-relevant messages, and (4) to ask students to find the problems in post-listening. Based on Dunkel's suggestion, the pre-listening instruction focused on the teacher's reminding the subjects of how to tell the teacher's accent from the speaker's on the tape, to know the different spoken and written languages about the contents, to be aware of linking sounds, to catch the main idea, to predict what to hear and to deal with noise and redundancy. Namely, the pre-listening instruction functioned as controlling the variables: stress, intonation, accents and the differences between spoken and written languages. In the experiment class, the

pre-listening instruction additionally involved the teacher's reminding the subjects to take notes by writing down key words or signal words such as dates and time. The whole pre-listening instruction took approximately five to ten minutes.

When it comes to while-listening, the contents of while-listening were passages or dialogues excerpted from the listening training book. Simply put, the experiment was carried out according to the school schedule. By following the viewpoint of letting listeners listen to the same content for several times to get the main point ('Critical Language Programs', 2004), the researcher allowed the subjects in the experiment to listen to the same content four times. In the experiment class, the subjects were asked to take notes for the first two times and concentrated only on listening as well as answering the questions for the last two times. The activity aimed to avoid the disturbance of the variable: the physical phenomenon of the short memory span (Brooks, 1964). In the control class, however, the subjects were only asked to listen four times repeatedly without taking notes. The nine units of listening tests aimed to provide the subjects with enough practice to form a habit of adopting the technique of note-taking (Chamot & O'Malley, 1987). The whole while-listening period lasted approximately fifteen to twenty minutes.

The last stage of a listening test was post-listening. Based on Dunkel's (1986) suggestion that listeners have to find their problems in listening in the post-listening stage, the post-listening activity aimed to provide the subjects with an opportunity to completely understand the content. The researcher would always read each sentence of the script and would discuss meanings of the sentences with subjects to let the subjects find their own problems in listening. The whole post-listening took

approximately twenty-five minutes.

After the nine listening tests were finished, a posttest (extracted from the fifth part of Review 1 and 2) was conducted. The worksheet for the experiment class was the same as the one used for the control class. That is to say, no space was provided for note-taking. It depended on the subjects in the experiment class to decide if they would like to take notes or not. In other words, the way in carrying out the pretest and the posttest was identical except for the content.

Subsequently, the researcher designed a feedback questionnaire and analyzed the survey in quantity after the subjects finished the questionnaire. Finally, the researcher gathered the raw data of scores for analysis.

Data Analysis

Data collected in the research contained: (1) scores of the pretest, the posttest, and nine units of listening tests; (2) scores of responses to the personal profiles and the feedback questionnaire, and (3) statistical analysis. The approaches of data analysis were presented as follows.

Scores of the Pretest, the Posttest and Nine Units of Listening Tests

The test score for the pretest, the posttest and nine units of listening test was 100 points. Furthermore, in the pretest and the posttest, there were 10 multiple choices with 10 points for each question. In the nine units of listening tests, there were 5 multiple choices with 20 points for each question.

Scores of the Responses to the Questionnaires

The data was calculated in percentage except the question in the feedback questionnaire, “What are the first three improved aspects after the experiment?” The

scoring procedure was explained as follows.

1. Total scores are calculated by the following formula.

   Total scores = 3 points given to the aspect chosen by the subjects as the first improved one ˙ the numbers of the subjects who chose it + 2 points given to the aspect chosen by the subjects as the second improved one ˙ the numbers of the subjects + 1 point given to the aspect chosen by the subjects as the third improved one ˙ the numbers of the subjects who chose it

2. Mean scores are calculated by the following formula.

   Mean scores = Total scores of the aspect / the number of the subjects who chose the aspect

Statistical Analysis

The SPSS for Windows (version 10.0) computer program was utilized in three steps.

To begin with, Paired Sample T Test in SPSS helped compare if there was any significant improvement after the experiment.

Secondly, a comparison between the experiment and control classes was analyzed with Independent Samples T Test to check if the subjects taking notes performed better than those who did not.

Last, with Independent Samples T Test, the comparison between high and low proficiency groups in the experiment class was also discussed for investigating which group benefited more from note-taking.