



1.1 Motivation

In our daily activities, 45% of our time is devoted to all kinds of listening activities (Yates, 1979). Since listening covers up the main portion of our life among the four language skills, it therefore should deserve a full investigation and exploration. Contrary to our expectations, in foreign language instruction, listening receives the least attention and has been neglected among all the four language skills (Frommer, 1989). In fact, not until Asher's (1977) work on Total Physical Response has listening started to be considered as an important component in language teaching. However, in the acquisition of a second language, the skill of listening in fact has been questioned as to whether it should be perceived as a separate skill from the other three or should be integrated with the other three skills by language teachers. Boyle (1987) investigated this unsettled issue. In relation to this issue, pedagogically there exists a general acceptance of the four-skill model (Rivers & Temperley, 1978; Stevens, 1977). That is, these four skills are not supposed to be separated from each other; instead, they should receive the same amount of importance and associate each other. The acceptance of Boyle's model results in substantial investigations and explorations in listening. In comparison, the skill of reading has been investigated widely in different aspects such as bottom-up and top-down processing (cf. Goodman, 1970; Nuttall, 1996), schemata theory and background knowledge (cf. Clarke & Silberstein, 1977), the role of affect and culture (cf. Dole, Brown, & Trathan, 1996; Fitzgerald, 1994), the power of extensive reading (cf. Green & Oxford, 1995; Krashen, 1993), and adult literacy training (cf. Bell & Burnaby, 1984; Haverson & Haynes,

1982). Unlike the skill of reading with quite an abundance of research, there indeed exists a discrepancy in listening. With view to this, researchers have dedicated themselves to examining the listening process. A great number of studies have been conducted to examine different dimensions of listening comprehension (cf. Johnstone, 2000; Samuels, 1984; Sherman, 1997). Some were intended to center on listening materials (cf. Jensen & Hansen, 1995; Shohamy & Inbar, 1991), some on learner strategies (cf. Hale & Courtney, 1994); and others on task effects (Teng, 1997).

As previously mentioned, listening plays an indispensable role in our life. In addition to the prominence in our daily life, in the college-level contexts, the whole proportion of one period can even be dedicated to listening only (Wilt, 1958), and with such a claim, it is not surprising to find that the lecture is considered to be a major vehicle for professors to transmit knowledge (Scheffield, 1974). Although listening to lectures can be an effective way of learning, only listening does not necessarily mean the learning content can be transmitted to our long-term memory directly. According to Spizer's (1939) study on retention, it was found that half of what we heard would not be able to retain in our memory for more than one day unless we adopted the strategy of note-taking and review our notes. As time goes by, two weeks later, only twenty percent will be left in our memory. On the other hand, it has been proved that those who take notes can gain a better retention of about ninety-five percent of what they hear. The findings showed that note-taking should be a necessary activity while listening to lectures to retain our acquired knowledge.

Though the activity of note-taking seems to be identified and widely recognized as a crucial tool in lecture learning, according to Dunkel and Davy (1989), the prevalence of the activity of listening to lectures has not complemented with substantial research which focused upon a deeper investigation of the relationship between note-taking and lecture comprehension. There exists a controversial

argument – whether note-taking can enhance test performance on lecture comprehension. The findings of related studies of improved recall are inconsistent and even contradictory (Ash & Carlton, 1953; Crawford, 1925; DiVesta & Gray, 1972; Fisher & Harris, 1973; Howe, 1970; McClendon, 1958). Additionally, the efficacy of note-taking has long been an on-going unsettled issue which has been abundantly studied. Despite that Howe (1970) and McClendon (1958) concluded that no significant differences between note-takers' and non-note-takers' recall performance, a large overwhelming proportion of research findings claims that the recording of notes facilitates students' comprehension and retention (Aiken, Thomas, & Shennum, 1975; DiVesta & Gray, 1972, 1973; Hartley, 1983; Kiewra, 1985; Lin, 2005). However, some researchers found that the beneficial function of note-taking take effect only under the circumstances that learners are allowed to review their notes or adopt their preferred strategies (Fisher & Harris, 1973; Fowler & Barker, 1974). Furthermore, the effects of review on recall are regarded as relatively definite (DiVesta & Gray, 1972; Howe, 1970). However, recall itself can be divided into two kinds – immediate recall and delayed recall (Chaudron, Loschky, & Cook, 1994). In terms of the immediate recall, Chaudron, Loschky, and Cook (1994) examined both qualitative and quantitative notes and found neither of them could significantly serve as an indicator of good listening comprehension and suggested that other measures rather than immediate recall should be adopted.

Note-taking has brought about another argument in literature – the superiority of external storage over encoding. DiVesta and Gray's (1972) claim that the action of recoding notes itself is a more prominent contributor to a better recall than reviewing notes. Contradictory to the previous findings, Annis & Davis (1975) claim that the chance of reviewing notes produce a better recall performance than “mental” review. These inconsistent findings need further investigation to clarify this argument.

Since note-taking has been mostly proved to be facilitative (c.f. Crawford, 1925; DiVesta & Gray, 1972; Fisher & Harris, 1972; Lin, 2005), Lin (2005) further proposed that more factors such as language proficiency and the chance of previewing questions and the analysis of note content should be further examined in relation to note-taking.

Furthermore, in terms of the note content, the issue of what kind of notes can yield a better comprehension still remains unaddressed. Chaudron, Loschky, and Cook (1994) contended that neither qualitative nor quantitative notes could significantly serve as an indicator of good listening comprehension and suggested that other measures rather than immediate recall should be adopted. Based on the above research inadequacy, this study intends to explore the relationship among note-taking, test performance, delayed recall, and the chance of reviewing notes.

1.2 Theoretical Background

In the present study, the relationship between note-taking and comprehension is the major theme of this study. To investigate such a relationship, setting up the criteria for deciding good notes therefore is crucial. Different researchers have invented various models to examine students' notes. For example, Nye (1978) developed three criteria to evaluate: (a) content, (b) layout, and (c) legibility of students' notes. In addition, to evaluate notes, Dunkel's (1988) model adopted five criteria – the total-number-of-words score, information-units count, test-answerability score, completeness score, and the efficiency ratio. Chaudron, Loschky, and Cook (1994) further involved the distinction between note quality and quantity by classifying the number of total words and total information units in notes as note quality and categorizing efficiency, completeness, test answerability, level of information, and organizational features.

Dunkel's (1988) model is adopted in the present study since it contains all the criteria that were once examined by other researchers one by one (cf. Baker & Lombardi, 1985; Fisher & Harris, 1974; Hartley & Marshall, 1974; Howe, 1970; Locke, 1977). Therefore, this model consists of most necessary criteria to evaluate the quality or quantity of notes. Unlike Nye's (1978) model, Dunkel defined each criterion in a specific way and designed concrete methods to evaluate notes.

The criteria for good notes are defined by Dunkel (1988) as follows: to score the total number of words, any form including words, symbols, abbreviations, and illustrations which indicate any information will be viewed as a token. Hence, the total number of words equals the summation of all the forms. The information-units count represents the total number of subjects' pieces of written information in their notes. The definition of information units abides by Aiken, Thomas, & Shennum's (1975) definition that information units are regarded as sentences or clauses composed of a single subject-verb or subject-verb-object formation which presents a piece of information not mentioned previously and which can be judged true or false. The test-answerability score results from the number of information units that appear in subjects' notes and can serve as a cue to answer comprehension questions. The completeness score is a result of division of all possible information units by subjects' notes. The efficiency ratio equals the number of information units divided by the first criterion – the total number of words.

1.3 Scope of the Study

The present study intends to investigate the relationship between note-taking and students' listening comprehension. Though note-taking has been examined for a long time, in the setting of ESL learning environment a deeper investigation into the note content is necessary. The present study adopted both qualitative and quantitative

methods to probe into note-taking and shed some light about what note content could yield a better comprehension and retention. It is hoped that the findings can provide some evidence for the effects of note-taking and help ESL teachers understand how to guide students to take notes while students are listening to lectures.

1.4 Research Questions

The research questions that are addressed in the present study are as follows:

1. What kind of notes can contribute to a better comprehension?
2. Among all the criteria of note contents, which ones are the best predictors of EFL learners' listening performance?
3. What is the relationship between note contents and global and local questions?
4. Can the subjects benefit from note reviewing?
5. What kind of notes can contribute to a longer retention?

1.5 Definition of the Terms Used in the Thesis

The present study centers itself around the investigation into the relationship between note-taking and comprehension. For such a reason, the following terms will be repetitively utilized and this has led to the necessity of defining the terms in order to make them consistent throughout the study.

1. Note-taking: Note-taking is an action of recording the received information while subjects are listening to the listening text (DiVesta & Gray, 1972). There is no limitation on the subjects' note-taking form, that is, words, symbols, abbreviations, and graphics all can be considered notes (Dunkel, 1988).
2. Reviewing versus non-reviewing: Reviewing means being provided with subjects' own notes while they are doing the recall task and on the contrary, non-reviewing is defined as being rid of the chance of referring back to subjects'

own notes, that is, mental review (Kiewra, 1985).

3. Global questions versus local questions: Global questions are referred to as testing subjects' ability to integrate all the single pieces of information and their general comprehension (Van Dijk & Kintsch, 1983). Local questions, however, focus on a single piece of information in the text (Van Dijk & Kintsch, 1983).
4. Recall: A recall refers to a task that brings back any memory on the lecture and makes it concrete through the written form (DiVesta & Gray, 1972).

1.6 Organization of the Thesis

This thesis is organized as follows. In Chapter 2, literature related to the research questions is reviewed and summarized. Issues in functions of note-taking, effects of note-taking, the nature of lecture, criteria for deciding good notes, and related studies are discussed. Two major functions of note-taking are first discussed by reviewing quite a few studies of psychological studies. After specifying the value of note-taking, its effects on test performance in L1 and L2 settings are then presented. Finally, the style of lecture and criteria for deciding good notes and related studies are reviewed.

In Chapter 3, the research design is described in the order of the participants, methods, and procedures of the present study.

In Chapter 4, the results of the present study are presented along with an in-depth discussion about the research questions.

Chapter 5 summarizes the major findings of the present study and draws pedagogical implications. Finally, limitations and suggestions for future research are discussed.