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TOPIC FAMILIARITY AND SECOND LANGUAGE LEARNERS' ORAL PERFORMANCE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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1997

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ABSTRACT

In the field of second and foreign language acquisition, it is now widely recognized that a second language learner's language, like the language of native speakers, varies in different situations and in response to different tasks. What is not clear, however, are the underlying causes of this variation. Several causes of interlanguage variation such as linguistic contexts, tasks, and interlocutor have been identified and researched. However, there may be other possible important factors in interlanguage variation that remain unexplored or under-researched. Topic of discourse is one such factor. As Tarone (1988) states "the topic of communication... is one of the most under-researched areas in the study of interlanguage variation" and "the precise effects of topic upon variation have yet to be established" (p. 119).

The purpose of this study is to describe the relationship between discourse topics and second language learners' oral performance. In addition, this study is intended to investigate whether SLA processes such as language transfer occur differentially as claimed in the discourse domain hypothesis advanced by Selinker and Douglas (1985).

Six Taiwanese graduate students participated in this study. Data were collected from the NS-NNS conversation and NNSs presentation. The data were
audiotape recorded and then transcribed. The grammatical complexity, fluency and accuracy of subjects' speech production were analyzed. It was found that discourse topics have a great impact on the fluency of L2 learners' speech production.
To My parents
and my husband
Vita

March, 14, 1967

Born in Taipei, Taiwan, Republic of China

1989-1991

Part-time English Instructor

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PUBLICATIONS


FIELDS OF STUDY

Major Field: Education


Minor Fields: Linguistics and English
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CHAPTER 1

THE PROBLEM

INTRODUCTION

Speaking is a complex process in which L2 learners need to draw upon several kinds of knowledge in order to successfully accomplish the assigned tasks. Topic-related background knowledge, also referred to as content knowledge, is one of the kinds. Topic-related background knowledge could determine what L2 learners are able to say. The statement of Tanner (1982) and Applebee (1982) can apply to speaking, even though their statements refer to writing. Tanner (1982) stated that writing itself is subject-specific, and a person must have something in mind to write about, some knowledge of a subject. Applebee (1982) also notes that "when a subject is known very thoroughly, the component concepts will be well enough integrated and the writing is usually very fluent, with few pauses or changes of direction" (p. 376). In spite of its crucial role in oral performance, relatively little has been done to
explore the relationships between the topic familiarity and second language learners' oral performance.

STATEMENT OF PROBLEM

In the field of second and foreign language acquisition, it is now widely recognized that a second language learner's language, like the language of native speakers, varies in different situations and in response to different tasks. What is not clear, however, are the underlying causes of this variation. Several causes of interlanguage variation such as linguistic contexts, tasks, and interlocutor have been identified and researched. Saunders (1987), for instance, studied Japanese learners' production of the -s morpheme in consonant clusters (-ps, -ts, and -ks) in nouns and in verbs and found that learners were more likely to omit or shorten the -s in verbs than in nouns. Bahns and Wode (1980) reported differences in two German children's use of English negative constructions in naturally occurring speech and structured interviews. However, there may be other factors in interlanguage variation that remain unexplored or under-researched. Topic of discourse is one such factor.

Research in the field second language acquisition has suggested that differences in content knowledge can affect learners' reading and listening comprehension (Gass & Varonis, 1984; Lee, 1986; Lipson, 1982; Steffensen, Joag-Dev & Anderson, 1979; Stevens, 1980). Research on writing also reveals
that both L1 and L2 writers perform better both qualitatively and quantitatively when writing about topics they know well (Chesky et al., 1987; Tedick, 1988, 1990; Winfield & Barnes-Felfeli, 1982). Relatively little has been done, however, to explore the effect of topic knowledge on L2 learners' oral performance. As Tarone (1988) states "the topic of communication... is one of the most under-researched areas in the study of interlanguage variation" and "the precise effects of topic upon variation have yet to be established" (p. 119). Among the limited amount of literature concerning the effect of content knowledge on L2 oral performance (Smith, 1989; Woken & Swales, 1989; Zuengler, 1989), the research designs and contexts are varied, and the findings are inconclusive.

To investigate the relationship between topic familiarity and L2 learner's oral performance, Selinker and Douglas (1985, 1986, 1989) conducted a series of case studies involving interviews of non-native graduate students on work and life domain topics. It was found that subjects employed different communicative strategies and rhetorical organization in talking about their major fields than they did in talking about their own lives or culture.

Based on these research findings, Selinker and Douglas (1985) proposed a discourse domain hypothesis which is based on the notion of specialized contexts for language development. Selinker and Douglas (1986) further defined the discourse domains as a "personally and internally constructed 'slice'
of one's life that has importance and over which the learner exercises content-
control" (p. 4). The hypothesis holds that "in creating ILs, language learners
first create "discourse domain" and "IL structures are created differentially"
therein (Selinker, and Douglas, 1985).

This hypothesis, although intuitively appealing, has not attracted much
attention from researchers. In addition to the studies done by Selinker and
Douglas (1985, 1986, 1987, 1989), only five reported studies (Whyte, 1992,
1993, 1994, 1995; Cornu and Delahaye, 1987) have investigated the discourse
domain hypothesis. Among these studies, the research findings are not
consistent.

Cornu and Delahaye (1987) collected two sets of data from the Dutch-
French interlanguage of two university economics students to investigate the
discourse domain hypothesis as to whether the notion of domain has any
bearing on variability in the utterances produced by L2 learners. The data
consisted of a conversation on subject's hobbies, then a five-minute break,
followed by a second conversation on the target subject area. The analysis of
data revealed the significant differences in syntactic, rhetorical strategic and
lexical areas between subjects' conversations on two topics. The number of
embedded sentences is far greater in the conversation for the subject's major
field (refers to as C2 hereafter) than for subject's hobbies (C1). The errors are
corrected much more readily in C2 than in C1. In addition, verbs are used more appropriately in C2 than in C1.

Whyte (1992, 1994a, 1994b, 1995) has designed a series of studies to test the discourse domain hypothesis. She controlled for the cognitive complexity of the topics, the modes of discourse that a topic requires, and the situational context for a topic in examining the impact of domain-specific knowledge on learners' interlanguage. Instead of eliciting talk on academic major and life story, she compared subjects' oral production on their academic major which was viewed as the domain topic, and on a topic chosen from their textbook, which was considered as the general topic. The analysis of grammatical complexity and accuracy showed no cross-topic variation for either the invested or control subjects. The analysis of discourse organization did, however, reveal evidence in support of the predictions that domain talk may be constructed more independently and more coherently than general talk.

As indicated above, most of the studies that examine the discourse domain hypothesis (Selinker and Douglas, 1985, 1986, 1989; Whyte, 1992; Cornu and Delahaye, 1987) contrasted academic major and life domain topics. Moreover, some of the studies (Selinker and Douglas, 1985, 1986, 1989) compared the data elicited by different interviewers (a researcher in the major field topic, and subject's friend for the life story topic) or by various tasks (interview, mini-lecture). In a research design of this sort, it is very likely that an interlocutor
factor, task variables, or the degree of the cognitive complexity of the topics could serve as confounding variables in the study. To increase understanding of the topic-related interlanguage variation, a study design that elicits talk from subjects on a wider range of topics and which eliminates the possibility of the interlocutor factor as a confounding variable is needed.

Even though limited research has been done to investigate the discourse domain hypothesis, several studies have been conducted to examine how topic influences a second language learner's participation in conversations. Zuengler (1989b), and Zuengler and Bent (1991) investigated the relationship between topic knowledge and participation in conversations in NS-NNS interactions. Subjects were asked to engaged in a 10-minute conversation about food and then to have another 10-minute conversation about their major field. In dyads consisting of the unequivalent expertise level, the results showed that interlocutors with greater content expertise (true both for NS and NNS relative content experts) participated more actively in the conversation than did their "non-expert" partners. The relative experts produced significantly more talk and more fillers. Zuengler's work on the conversational interaction has shown that topic expertise may have a positive effect on learner production. Although the results of these studies provide support for the discourse domain hypothesis, the studies were not designed to test the discourse domain hypothesis.
Woken and Swales (1989) examined the interaction between non-native speakers who are computer experts and native-speakers who are unfamiliar with the computer software being taught, and it was found that non-native speakers dominated in the overall amount of talk and generally exceeded the native speakers in length of T-unit. In addition, the non-native speakers dominate in the use of direction and corrections of their partner.

The Woken and Swales (1989) study has shown that certain factors such as task status and topic expertise can affect the nature of interaction dramatically. However, the scope of this study is limited to interactions whose function was instructional. More research on interactions whose functions are other than instructional is needed in order to gain a fuller understanding of topic-related interlanguage variations.

THE PURPOSE OF THE STUDY

The purpose of this study is to describe the relationship between discourse topics and second language learners' oral performance. In addition, this study is intended to investigate whether SLA processes such as communicative strategies and language transfer occur differentially as claimed in the discourse domain hypothesis advanced by Selinker and Douglas (1985). This research is an exploratory study, designed as a case study which should serve as the basis for future research.
This study addresses the following questions:

In the natural NS-NNS conversations and NNS presentation:

(1) How is the topic familiarity related to the second language learner's turn-taking patterns and participation in NS-NNS interaction?

(2) What is the relationship between topic familiarity and the grammatical complexity of second language learner's oral production in terms of
   (a) mean length of T-units?
   (b) mean length of error-free T-units?

(3) What is the relationship between topic familiarity and the fluency of second language learner's oral production in terms of
   (a) the overall length of speech?
   (b) the rate of speech?

(4) What is the relationship between topic familiarity and the syntactical accuracy of second language learner's oral production?

(5) Do SLA processes such as language transfer take place differentially within discourse domains, as held in the discourse domain hypothesis advanced by Selinker and Douglas (1985)?
DEFINITION OF TERMS

The following terms as used in the present study are defined as follows:

**Topic familiarity**: Subjects' self-report on the degree of familiarity they have in language and content on a discourse topic.

**Participation**: The participant's active involvement, identified by the degree of topic control, self-selection, allocation and activity sequencing during the process of turn-taking (van Lier, 1988).

**T-unit**: an index of syntactic maturity defined "as a single main clause...plus whatever other subordinate clauses or nonclauses are attached to, or embedded within, that one main clause" (Hunt, 1970)

**Error-free T-unit**: a modification of the T-unit. For a T-unit to be judged as error-free, in the present study, it must not contain morphological or syntactic errors, or errors related to article usage, and it must make contextual sense.

**Mean length of T-unit/error-free T-unit**: index calculated by the mean number of words per T-unit/ error-free T-unit in the speech.

**Overall length**: index of fluency as measured by the total number of words uttered per topic.

**Mean turn length**: index of fluency as calculated by dividing the speaker's total time at talk by the number of speaker turns.
**Speech rate**: index of fluency as calculated by the total number of words by the total time at talk, i.e., number of words per minute.

**SIGNIFICANCE OF THE STUDY**

The present study contributes to the field of second and foreign language acquisition in several ways. First, it will provide data to add to the dearth of L2 speaking research concerning the effects of topic familiarity on oral performance. Second, since this study is partially designed to investigate the discourse domain hypothesis advanced by Selinker and Douglas (1985), the results of this study can contribute to the existing evidence of interlanguage variation in relation to topic familiarity and second/foreign language acquisition research in general.

In addition, because this study is a case study, and because the subject was asked to perform in various topics in different contexts, it will provide a better understanding of the relationship between topic familiarity and an L2 learner’s oral performance. Moreover, this study examines both quantitative and qualitative data collected from the subject. In so doing, this study will provide more insight into how topic variables affect learners' oral performance.

Finally, this study has implications for foreign and second language teaching, testing and acquisition research designs. If the results show that topic familiarity affects learners' oral production, topic as a variable needs to be
cluded when creating a research design, or when teachers assess students' oral proficiency since a single test can not provide a complete picture of a student's oral proficiency.

ASSUMPTIONS

The present study is based on the following assumptions:

First of all, it is expected that the subjects will put forth their best effort in responding to each topic. Secondly, subject's oral productions accurately reflect their speaking ability. Thirdly, subject's will choose topics according to the instruction: three of which they are familiar with and three of which they are not familiar with. In addition, subject's will honestly express their feelings on each topic in the interviews. Moreover, it is assumed that information from the personal data questionnaire is accurate.

LIMITATIONS

Because the research design of the present study is a case study, the subjects were not randomly selected from a population. In addition, the sample size of this study was small. Moreover, the subjects of this study only consist of Taiwanese adult students. The results may not be generalizable to the second language learners from other contexts or countries.
This dissertation is organized as follows. A review of the related literature is presented in Chapter 2. Chapter 3 describes the methods and analysis used for the present study. The analyses and the results of investigation are presented in Chapter 4. Chapter 5, the conclusions chapter, includes a summary of the entire research, answers to the research questions, and presents recommendations for further study. A bibliography and Appendixes are also included.
CHAPTER 2

REVIEW OF LITERATURE

Introduction

This study examines the effect of topic familiarity on interlanguage variation and the discourse domain hypothesis (Selinker & Douglas 1985), which seeks to describe and explain the cross-topic variation. This chapter provides an overview of the research concerning the effect of topic familiarity on second language learners' comprehension and production of discourse. The chapter begins with a review of literature on the effect of background knowledge on second language reading and listening comprehension, followed by a survey of research findings on the relationship between topic familiarity and first and second language writing. The final section presents research findings on the relationship between topic familiarity and second language learners' oral performance.

It is widely recognized that topic knowledge plays a significant role in L2 reading comprehension (Anderson & Urquhart, 1988; Carrell, 1983; Lee, 1986; Mohammed & Swales, 1984; Nunan, 1985; Olah, 1984; and Zuck & Zuck,
Several studies on L1 and L2 writing also reveal that subjects produced more coherent and longer texts on the topics they know well (Chesky et al., 1987; Tedick, 1988, 1990; Winfield & Barnes-Felfeli, 1982). However, relatively little research has been done to explore the effect of topic knowledge on a L2 learner's oral performance. Among the limited number of studies concerning the effect of topic knowledge on L2 oral performance, the research designs and contexts varied and findings are inclusive.

**Background knowledge and reading comprehension**

Research concerning background knowledge related to comprehension and recall has been conducted and presented in the professional literature. Research on reading comprehension among native speakers of English has shown that the ability to understand texts is based not only on the reader’s linguistic knowledge, but also on the reader’s background knowledge. Stevens (1980) conducted a study to investigate the effect of background knowledge on a group of ninth graders’ reading comprehension. The subjects’ knowledge was assessed by means of a multiple-choice quiz. From this knowledge assessment, high knowledge and low knowledge materials were identified for each subject. The results of the study indicate that knowledge was a significant factor; it indicated that processing higher
knowledge concerning the topic read greatly aided comprehension of the reading text of that topic.

Unlike Stevens (1980), Langer and Nicolich (1981) elicited subjects' prior knowledge in terms of free word association. Subjects who were native speakers of English were asked to write all they could remember about the passages after they had read the passages. They found that the level of prior knowledge can predict the student's success in recalling the content of a reading passage. In an investigation of the relationship between prior knowledge and reading comprehension, Lipson (1982) also showed that prior knowledge was a significant factor in reading comprehension for both average and poor readers.

Research findings on the L2 reading process sometimes parallel those of the L1 reading research. In a cross-cultural study, Steffenson et al. (1979) investigated the comprehension of Americans and native Americans through readings of passages about an American wedding and an Indian wedding. The Indians recalled more about the Indian wedding and elaborated more in their recall about the information than did the Americans. Similarly, the Americans recalled more about the Americans wedding and elaborated more in their recall about the information. The results of Carrell's (1983) study indicate that while background knowledge does not influence non-native speakers' reading comprehension, it plays a significant role in native speakers'
reading comprehension. Lee (1986) challenged Carrell's findings and replicated the experimental method and procedures, with the exception that the subjects in Lee's study wrote their recalls in their native languages. Lee's results reveal that all three components of background knowledge affect non-native speaker's reading comprehension.

**The effect of topic knowledge on L1 writing**

Rushton and Young (1974) conducted an experiment in which they compared essays written by sixth-form public school boys with essays written by a group of young mechanics of similar age who were attending a general course in industrial training at a college. Based on the concepts of "elaborated" and "restricted code," introduced by the British sociologist Bernstein (1971), they predicted that they would find a general superiority in the middle-class group on certain grammatical structures when the mean scores on all the essays taken together were compared, but that this superiority would not occur on the technical titles. The essay titles were categorized according to the style of writing and the treatment of the subject matter. Three categories were produced by the use of these criteria. Examples include the following:

1. Imaginative descriptive: "The City at Daybreak"
2. Opinionative discursive: "the pleasure of making things"
The subjects were given nine essay titles on which to write and were expected to hand in essays over a period of some months. On the commonplace subjects (#1 and #2), the essays of the two groups showed the expected language differences, while on the technical subjects (topic #3), the working class boys produced a higher frequency of complex nominal modifications in their technical writing than did a sample drawn from a sixth-form public school sample. They concluded that the choice of subjects or essay titles does appear to be a powerful influence on syntactic selection in writing. In addition, subject choice appears to be able to influence the level of linguistic performance in student writers.

Rushton and Young’s (1974) study is important in that it adds to the limited data base on the effects of topic knowledge. However, the study would be more satisfactory if the difference in overall quality of the writing between the two groups was shown instead of only comparing certain linguistic items such as passive voice and nominal modification usage. In addition, topic #3 may be too field-specific; it is difficult for a layman to write much about it.

In both Langer’s (1984) study and McCutchen’s (1986) study, the linguistic knowledge and the content knowledge of the subjects were measured.
The former used the California Test of Basic Skills to measure subjects' verbal ability and found a significant relationship between reading and language achievement scores and the holistic score for writing quality, while the latter employed the California Achievement Test to pair subjects with equal verbal ability and different prior knowledge.

Langer (1984) investigated how the focus of an assignment interacts with subject knowledge to affect writing. Four tenth-grade students were assigned two writing tasks at two different points during the semester. The tasks were developed by two history teachers who assisted in the study.

Prior to each writing task, Langer used a free-association task to measure the subjects' knowledge of the topics on which they were going to write. The topics assigned by the teacher were:

1. Write a paper comparing city and frontier life with regard to individualism and democracy.
2. Write a one or two page essay on your version of a Utopian society, the kind you would like to live in.
3. It has been stated that in the 18th and 19th centuries the South was a deferential society. In your answer, be sure to discuss the concepts of prejudice and acquiescence and how each related to this conclusion.
4. Some historians refer to the 1920s as a decade in American
history when sexual freedom and the pursuit of happiness flourished. At the same time, it is noted that the 1920s were characterized by harsh moralistic and anti-foreign sentiments. Explain how social changes during the 1920s influenced the growth of new values that conflicted with traditional ones.

The Students' writing samples were scored on five separate measures: overall quality, coherence, syntactic complexity, audience, and function. The results of the correlational analysis indicated that the knowledge measures were significantly related to the overall quality ratings of the samples. However, the correlation between the knowledge measures and syntactic complexity was not significant. In addition, the knowledge measures were not significantly correlated with the measure of coherence.

Langer further analyzed the topics the teachers developed and concluded that different tasks require different writing strategies. Assignments #1 and #4 require a comparison/contrast pattern, whereas the other two require a thesis/support pattern. For the comparison/contrast assignment, both the background knowledge of the topics and the way the students organized the related knowledge were related to essay quality. In contrast, for the thesis/support topic, the amount of information available is related to essay quality, but the organization of that information is not. Langer
(1984) claimed that different assignments, assigned for different purposes, tap different aspects of a writer's knowledge of the topic. She posited that "a low score on a particular paper might not mean that a student does not know the information but that the information that was available was not organized in a useful way for that particular assignment" (p. 40).

Langer (1984) also examined the extent to which a student's choice of audience and function in their writing was related to the kinds of knowledge they brought to the task. The results of an ANOVA performed based on audience type showed that students who addressed their papers to the teacher as part of an instructional dialogue had significantly higher scores for overall fluency than those who addressed their papers to the teacher as examiner.

The results of the ANOVA on function categories revealed that students who wrote analytic essays had significantly higher knowledge scores than subjects who summarized the information. Langer posited that when students have limited knowledge of a topic, they may resort to writing summaries when analysis would have been more appropriate "because the summary format permits them to recount formats without having to interrelate them more fully" (p. 42).

A parallel finding concerning the relationship between prior knowledge and holistic scores was obtained in the study by Chesky et al. (1987). However, no significant differences were found in the quality or quantity of
students' writing as a function of peer or teacher audience. Unlike Langer's (1984) study, the results of the Chesky et al. (1987) study showed significant correlations between the knowledge measures and coherence and T-unit length.

McCutchen (1986) employed a 30-item completion text to tap subjects' knowledge of the terminology and rules of football. The subjects consisted of 30 male children, ten each from fourth, sixth, and eighth grade. The children were asked to generate eight texts, four on the topic of football and four on their school or people they knew. They met individually with McCutchen once or twice a week and were asked to produce one text during each session. Each time they met, the subjects were given a topic sentence that contained one or more blanks to fill. Subjects were asked to use that topic sentence as a framework for developing their texts. A sample sentence was "I think that_____ [football teams chosen by the writer] will/won't win the championship next year." (p. 435) In order to increase the children's motivation to put forth the necessary time and effort to create the text, McCutchen asked them to participate in a newspaper project. Subjects were told that their texts might be used for the sport and local news sections of the newspaper.

The essays were evaluated in terms of coherence, length, elaboration, and content. The results of this study showed that subjects, regardless of grade level, produced more coherent texts on topics they knew well. Subjects
produced longer texts on topics they knew well, although length differences were not statistically significant. As far as elaboration is concerned, control topics were more elaborated than football topics by the high-knowledge subjects. In contrast, low-knowledge subjects elaborated their football and control texts equally. According to McCutchen (1987), this indicated that differences in elaboration are due to individual differences of the subjects, not to either background knowledge or age.

McCutchen concluded that the subjects' differences in linguistic knowledge best explain the observed grade level differences in the coherence difference. She postulated that children gain more generalizable knowledge about texts or text production as they develop as writers. She further claimed that although content knowledge does not necessarily compensate for immature writing strategies, linguistic knowledge can compensate for limited content knowledge. This claim was based on a comparison of two texts. One was written by a low-knowledge eighth grade subject and the other by a high-knowledge fourth grade subject. The older child showed the ability to elaborate and to produce cohesive ties between sentences, whereas the younger child only listed his ideas, even though his ideas were more insightful in terms of content than the older child's.
The effects of topic on L2 writing

Winfield and Barnes-Felfeli (1982) conducted a study to investigate the effects of familiar and unfamiliar cultural contexts on the writing of ESL subjects. Ten Spanish-speaking ESL learners and ten ESL learners from a variety of language backgrounds were asked to read two passages. One was on the Spanish classic Don Quixote, while the other was on Japanese Noh Theater. After reading the passages, subjects were asked to produce immediate written recalls. The recalls were scored for overall length, grammaticality and mean T-unit length. The cultural familiarity of the Spanish-speaking group resulted in significant effects for overall length.

Parallel to McCutchen's (1987) finding on L1 writing, Winfield et al. (1982) also found that ESL subjects produced longer texts on topics they knew well. However, what ESL students write may be as important as the length of their writing. The study by Winfield et al., concerning ESL students' recalls, demonstrated that correct interpretation of the reading passages assigned is significant.

Tedick (1988) investigated the effect of topic-related prior knowledge on L2 writing performance. The subjects of this study consisted of 105 international graduate students enrolled in composition courses offered by the ESL program at a large public university, 43 each at the beginning and intermediate levels, and 19 at the advanced level. There were fewer subjects
in the advanced group because most students at this level did not meet the researcher's two criteria, namely, that subjects needed to be new to the United States and not have had any previous academic experience in an English-speaking country. Subjects were asked to write two essays. The first topic was chosen from the repertoire of topics used by the ESL program for a diagnostic examination. The second topic was created by the researcher; the topics were as follows:

(1) In a recent new magazine, a famous educator argued that progress makes us lazy. Do you agree or disagree with this point of view? Explain why you believe that progress does or does not cause people to become more lazy or passive. Support your answer with specific reasons and examples.

(2) Every field of study has controversial issues. Debate over these issues often occurs among professionals in the field and leads them to conduct research in order to look for evidence to support one position on the issue over another. Choose a current controversial issue in your field of study. Discuss the controversy and explain your position on the issue, being sure to provide examples to support your position.
The experimental procedures for this study were conducted in two separate phases. The first phase corresponded with the administration of the ESL diagnostic examination. The second phase took place three weeks later. Before the second phase, students were informed that they would be asked to write a second essay which was for research purposes only and the results of the second essay would not affect either their grade or their status in the ESL program.

The essays were measured in terms of three dimensions: overall quality, as measured by holistic scores; fluency, as measured by overall length; and syntactic complexity, as measured by the mean number of and mean length of T-units and error-free T-units. It was found that the subjects' writing performance improved qualitatively when the subjects were familiar with the subject matter of the topic. A significant difference was found among the three course levels for the holistic scores, which increased in accordance with course level. The advanced group's mean length of T-unit and overall length were greater than that of the other groups. In addition, the mean length of T-unit produced by the advanced subjects was greater for the field-specific prompt (17.60) than for the general prompt (15.5). According to Tedick (1990), this indicated that the advanced group was producing longer and more syntactically complex texts on the field-specific prompt than the other two groups.
She further noted that when L2 writers were mature in terms of linguistic competence, they were able to demonstrate the level of their competence when given the opportunity to respond in writing to a topic having subject matter with which they were familiar. In contrast, when L2 writers' linguistic competence was lacking, their familiarity with the subject matter of the writing stimulus did not compensate for a lack of linguistic competence.

Tedick's (1988) study provided important preliminary data that needs to be investigated more fully. Tedick neglected to measure the subjects' content knowledge in advance. More research is needed in order to achieve a better understanding of topic variables on L2 writing and speaking.

The effect of topic familiarity on L2 oral production

In the field of second language acquisition, there is no well-developed theory of second language variation in relation to the topic of discourse. The effect of topic has been assessed by researchers in the area of second language testing and NS-NNS interaction. This section first presents the discourse hypothesis advanced by Selinker and Douglas (1985), followed by a review of the literature conducted to examine this hypothesis. Finally, two research strands in relation to learners' performance across topics are presented.
A. Discourse domain hypothesis

Selinker and Douglas (1985) proposed the discourse domain hypothesis, which holds that second language acquisition occurs within the domain of discourse which is created by and important to the learner rather than globally across interlanguage:

the important SLA processes, such as language transfer, fossilization, and backsliding, as well as avoidance, do not occur globally across ILs, but rather differentially within discourse domains (Selinker and Douglas, 1985, pp. 190).

Selinker and Douglas (1986) defined the discourse domain as "the personally constructed 'slice' of one's life that has importance and over which the learner exercises content control." In earlier work (1985), they suggested the topic area of "major field", "own life", and "own culture" as examples of domains created by international students in the US. The discourse domains are defined as follows.

A discourse domain is personally and internally constructed "slice" of one's life that has importance and over which the learner exercises content-control. Importance is empirically shown by the fact that in interaction one repeatedly talks about the area. Discourse domains are primarily dynamic and
changing, and may become permanent parts of a learner's cognitive system. Some domains may be created temporarily for particular important purposes. The concept also has a discontinuous aspect to it in that a domain can be taken up, dropped, left dormant and revived. Such domains are usually thus not fixed for life but may change with one's life experience and often do. (Selinker and Douglas, 1986, pp. 468-469).

This definition has manifested three dimensions of a domain topic: cognitive ("internally created" and are part of a learner's cognitive system), affective ("personal" and "important to individual), and practice (one repeatedly talked about it).

The discourse domain hypothesis proposes the following prediction:

1. In creating ILs, a learner creates discourse domains and uses them to develop his/her IL structure(s)...The important processes in IL learning (e.g., fossilization, backsliding, language transfer, communicative strategies, etc.) rarely occur across ILs, but occur primarily within discourse domains.

2. Discourse domains influence the syntactic units of IL learning.

3. No IL learner is monostylistic. There exists the possibility of several styles within each discourse domain.

This hypothesis is intuitively appealing. Intuition and common sense suggest that learners will perform better on topics in which they demonstrate
extensive knowledge. As Whyte (1994) states, it is expected that an international student will perform more effectively on the topics of his/her academic specialization because “much of the learners’ English input and many of their opportunities to interact with native speakers are likely to occur in the context of their topics of academic specialization” (p. 5).

This hypothesis, although intuitively appealing, has attracted little attention from researchers. In addition to the studies conducted by Selinker and Douglas (1985, 1986, 1987, 1989), there are only five studies conducted by Cornu and Delahaye (1987) and Whyte (1992, 1993, 1994, 1995) which have specifically investigated the discourse domain hypothesis.

Selinker and Douglas (1985, 1986, 1989) conducted a series of case studies involving interviews of non-native graduate students on work and life domain topics to investigate the relationship between topic familiarity and L2 learner’s oral performance. In Selinker and Douglas (1985), the data were collected through two informant sessions, both of which were videotaped. One was an interview conducted by one of the researchers with a technical text as the focus. The second informant session was an interview conducted by the research assistant who was a friend of the subject. They segmented the collected data into “episodes” and compared and contrasted the rhetorical strategies in the two interviews.
It was found that subjects employed different communicative strategies in discussion of their major fields compared with that of their own lives or culture. For instance, one subject appeared to be competent and confident in talking about his major field, able to circumvent vocabulary gaps and to correct his native interlocutor, but seemed less motivated to find vocabulary items and more deferential in life domain talk.

In the subsequent studies, Selinker and Douglas (1986) employed a research design similar to the previous study except that the data on subject's oral production were elicited from various contexts: a class presentation on a mathematics problem, Chinese music, a group conversation, and an interview. It was found that the rhetorical organization differed across topics.

The Selinker and Douglas studies have certainly provided insight into topic-related interlanguage variation. In addition, the research methodology (i.e., the combination of grounded ethnography and the subject-specialist informant procedure) which he suggested in researching the topic-related variation is certainly valuable. However, the results of their studies must be interpreted cautiously because of the data collection process employed. In their studies, they either used different interviewers to interview the subject as in Selinker and Douglas (1985), or they elicited the oral production from various contexts as in Selinker and Douglas (1986, 1987). In Selinker and Douglas (1985), the data were collected in two interviews: one by a professor
interviewing the subject on the topic of his major field and the other by a research assistant, who was a friend of the subject, on the topic of the student’s everyday life. Hence, the different communicative strategies that researchers found from the subject's talk in the two domains may result from interlocutor factors. In Selinker and Douglas (1986, 1987), the data were collected from both class presentations and group conversation. However, the differences that researchers observed in the subject's rhetorical organization among the discourse domain may be caused by the difference between planned and unplanned discourse.

Cornu and Delahaye (1987) collected two sets of data from the Dutch-French interlanguage of two university economics students to investigate the discourse domain hypothesis as to whether the notion of domain has any bearing on variability in the utterances produced by L2 learners. The first set of data consisted of a ten-minute presentation on an imposed topic related to economics and a casual conversation with the researcher. For the presentation, they were given one hour to prepare. During the presentation, they were allowed to rely on notes but could not read a prewritten text. They compared the subjects' oral production in two contexts: the presentation and the conversation. It was found that the subjects' oral performance was much better in the presentation than in the conversation with the researcher.
Because the subjects were well prepared for presentation, the variation observed between the two domains cannot be considered to be due to the topic variable only. In order to overcome this problem, the authors collected a second set of data. The second set of data consisted of a conversation on the subject's hobbies (C1), then a five-minute break, followed by a second conversation on the target subject area (C2). The analysis of the data revealed significant differences in syntactic, rhetorical strategic, and lexical areas between the two conversations. The number of embedded sentences is far greater in C2 than in C1. The errors are corrected much more readily in C2 than in C1. In addition, lexical verbs are used more appropriately in C2 than in C1.

Whyte (1992, 1994a, 1994b, 1995) has designed a series of studies to test the discourse domain hypothesis and to refine the definition of discourse domain. Whyte (1992, 1993, 1994) examines the impact of domain-specific knowledge on learners' interlanguage by eliciting talk on academic major and life story topics in interviews with international graduate students. The first study conducted by Whyte (1992) was a case study of a French mathematics graduate student who was interviewed by two nonspecialist native speakers. The conversation lasted a total of 25 minutes and was audiotaped and subsequently transcribed. The data were analyzed in terms of the discourse organization.
It was shown that the subject performed differently in discourse organization related to the domain of talk. Talk on certain math domain topics was characterized by lengthy time at talk, including long, structured turns, illustrating the speaker's content control of the topic. The complexity and flexibility of his knowledge was further revealed in his ability to follow a plan across intervening side sequences and to modify his contribution to fit his perception of the needs of his interlocutor, a nonmathematician. The data revealed, however, that the subject's responses to a conversational topic are strongly influenced by the native interlocutor's demonstration of the background knowledge. This study has shown that for the same speaker, differences in terms of the activation of the same domains depend on the interlocutor's knowledge, on the speaker's assessment of that knowledge and on the level of personal investment.

Based on the data complied in this study, Whyte also refines the definition of the discourse domain by adding three parameter to the discourse domain construct, including elaboration, stability, and importance, and proposed to distinguish domain from schemata in terms of demonstration of speaker's content elaboration, personal importance and stability to the topics. She proposed the revised definition of the discourse domain as follows, which provides a clear way to identify the domain topics.
A discourse domain is a topic area which is characterized by extensive knowledge (for which speakers possess an elaborated schema, and which they control completely), by important knowledge (which is central to networks of schemata, and in which they are invested), and by current knowledge (which speakers use frequently in interaction, and with which they are familiar).

The second study (Whyte, 1993) examined talk by four international professionals on topics in their work and life domains, as well as on general topics. Because these subjects held Hubert Humphrey fellowships, which fund a year of graduate study at the United States institutions for midcareer professionals from the Third World, they were expected to have well-developed work domains. In addition to discourse analysis, data were analyzed for fluency (i.e., speech time, turn length, and hesitation) and grammatical accuracy (i.e., past tense, copula, and noun marking in obligatory contexts). Results were mixed, although one subject emerged clearly as more fluent and accurate in conversation on topics in his professional field than on talk in his life domain.

Whyte (1994a) conducted the third study to improve the methodological drawbacks that were found in previous study. In her second study, she found that the elicitation of general talk proved problematic because subjects tended to respond to prompts for general topics in a way that involved their academic major or life domains. Conversely, certain subjects appeared unwilling to
engage topics in their academic major or life domains, perhaps perceiving these as inappropriate or irrelevant to the context of the elicitation session, a conversation with a nonspecialist and unfamiliar interviewer.

In the third study, Whyte (1994a) controlled for the cognitive complexity of the topics, the modes of discourse that a topic requests, and the context of the situation for a topic. Eight subjects from Levels 6 and 7 of the intensive English Program at Indiana University participated in the study. Whyte described the subjects as the "advanced learners of English who had been in the Program for 4-12 months and had TOEFL scores ranging from 470-580" (p. 291). Each subject was interviewed by the researcher on two topics: one was their major field, and the other was, according to the author, a neutral topic selected by the researcher from a Level 6 class textbook.

The performance of advanced ESL students discussing their academic major topics was compared with that on a general topic, and with the performance of a control group talking on two comparable general topics. The first group of subjects (invested group) demonstrated expertise and interest in their academic major topics and a corresponding lack of interest in the general topic, which was selected from their ESL class textbook. Subjects' perceptions of each interview topic was verified by questionnaire after the interview. In this way, independent evidence of the identification and classification of domain and general topics was obtained, and subjects who
indicated an unexpected level of interest in a particular topic could be eliminated from the study.

The control group talked about the topic of an ESL class research paper, which was selected as comparable to the first group's academic major topic, and a general textbook topic. Once again, the subjects' perceptions of their expertise and interest in each topic was obtained via a post-interview questionnaire. The data were analyzed in terms of fluency; the syntactic complexity which was measured by the number of clauses per t-unit; accuracy by the number of error per clause and discourse organization. As in the second study, the results were mixed. Only one subject performed more accurately and fluently on the topic with which he was familiar. Whyte (1994a) also reported that there was a discrepancy between subjects' responses in the pre-interview questionnaire and the way they participated in the conversation. Some subjects "seem to warm to topics they previously classified as uninteresting" (p. 299). She suggested the need for subjects to complete a post-interview questionnaire to indicate their views on the topics discussed.

In her dissertation, Whyte (1994b, 1995) employed a research design similar to the previous study (Whyte 1994a) and distributed a post-interview questionnaire to subjects to verify their views on the topics discussed. The data were examined in terms of fluency, grammatical complexity, grammatical accuracy, and discourse organization. Fluency measures included two
indexes of time in talking: speech time and mean turn length, and speech rate: words per minute and clauses per minute.

The analysis of grammatical complexity and accuracy showed no cross-topic variation for either the invested or control subjects. Similar to the results for grammatical analysis, both invested and control subjects showed highly similar behavior on the two topics. The analysis of discourse organization revealed evidence in support of the predictions that domain talk would be constructed more independently and more coherently than general talk. All invested subjects in the study constructed longer episodes in talk on their academic major topics.

Whyte's (1992, 1993, 1994a, 1994b) studies have contributed to the area of topic-related variation in several ways. In this series of studies, she sought to refine the definition of discourse domain with specification of the components of domain topics, including include (a) extensive knowledge, (b) the importance of the topic, and (c) the currency of the topic. Although these components have been included in the definition provided by Selinker and Douglas (1986), Whyte was the one who specified them. She also pointed out the methodological problems she encountered in her previous studies and cautioned researchers to control for other topic-related variables such as genre, and tasks for the further investigation of the discourse domain hypothesis. However, the complicated research design she employed with the intention of
controlling the other topic-related variables such as the cognitive complexity of the topic, the research setting may confound the results.

**B. Topic variable and NS-NNS interaction**

Even though very little work has been done to test the discourse domain hypothesis per se, several studies have been conducted to examine how conversational topics influence L2 learners' oral performance in NS-NNS interaction. Zuengler (1987, 1989a) examined the effects of "expertise" in interactions between native and non-native speakers. Ninety female subjects participated in the study and were grouped into 45 NS-NNS pairs. They were then asked to perform one section of the Meier Art Test of Aesthetic Perception and were asked to have a 10 minute conversation related to the pictures. After conversation 1, each individual was asked to complete the second section of the Meier Art Test. The pairs were randomly assigned to one of two experimental conditions (A & B), or to the control group (condition C). "Expertise" was induced by telling each of the subjects in the experimental conditions how they had performed on the task. In condition A, the NSs were told that they had a lower score on the task compared to their NNS partners. Condition B was the opposite of condition A. In the control group, none of the subjects were told how they had performed on the task.
The data were analyzed by determining each subject's level of standardness on the selected phonological variables from conversation 1 to conversation 2. It was hypothesized that the relative "experts" will show a decrease in L1 standardness and L2 correctness and that non-experts will display an increase in L1 standardness and L2 correctness. The results provided no support for the hypothesis about the experts. However, it was found that the expertise appeared to affect the phonological performance of the non-experts.

Zuengler (1989b) investigated the relationship between topic knowledge and conversational participation in NS-NNS interactions. The data were collected in a total of 27 different dyads. NSs and NNSs who are majoring in the same field were paired together. The students involved in this study represented four majors: mechanical engineering, electrical engineering, dairy science, and statistics. They were all male, full time graduate or undergraduate students. For the purposes of the study, Zuengler (1989b) divided subjects into three different sets of dyads. One set consisted of a NNS who was more advanced in his major than his NS interlocutor is was (i.e., a doctoral NNS student vs. an undergraduate NS student), another set of dyads was comprised of the opposite (i.e., with a more advanced NS), and the dyads of another set were judged to be at the same level in their major.
To examine the effect of the speakers' relative knowledge of the discourse domain, each dyad was asked to have a conversation in two different domains. The first domain was a topic outside their major about which both were expected to have equal knowledge, while the second domain involved a topic within their major. The topic which was outside the major was "food." The topic within the major was generated by a group of graduate and undergraduate students in that particular major; they were not subjects in the study. Subjects were asked to have a 10-minute conversation about food and then to have another 10-minute conversation about their major field. Both conversations were audiotaped.

Measures chosen to analyze the subjects' participation in the conversations include the amount of talk and the number of interruptions which occurred in the conversation. Zuengler adopted a functionally oriented coding system which was developed by Kennedy & Camden (1983) and only considered the interruptions which are labeled as the dominance move.

The analysis of interruptions indicated that there was no significant differences between the NNSs and NSs when they discussed a topic outside their field or within their field. The analysis of amount of talk revealed that the NNS spoke significantly more than NSs in the conversation about food and in the conversation within the field between more advanced NNSs and less advanced NSs.
A larger study consisting of 90 participants by Zuengler and Bent (1991), using a research design similar to that of Zuengler (1989), and employing measures such as amount of talk, use of pause fillers, topic moves, back-channel and interruption, revealed that L2 learners' participation in conversation varied from topic to topic. On the topic of food, the NNSs produced significantly more talk and more pause fillers, while their NS partners back-channeled more. In dyads in which the interlocutors (NSs and NNSs) were at an "equivalent expertise" level on a given topic, the NSs talked significantly more than their NNS partners, while NNSs back-channeled significantly more. In dyads consisting of the unequal expertise level, the results showed that interlocutors with relatively greater content expertise (true both for NS and NNS relative content experts) participated more actively in the conversation than did their "non-expert" partners. The relative experts produced significantly more talk and more fillers.

Unlike previous studies (e.g., Zuengler, 1989 and Zuengler & Bent, 1991) which investigated the effect of content knowledge on the advanced learners' production, Zuengler (1993) with a similar research design, examined the influence of content knowledge on the conversational participation of the male subjects with limited L2 proficiency (intermediate level). The results suggested that when non-native speakers are engaged in talking about something that they know more about than their interlocutors do, they
produced more talk, more fillers, fewer confirmation checks, and fewer back-channels than did their NS interlocutors. In contrast, the NNS relative non-experts produced less talk, an equal amount of fillers, more back-channels and equal number of confirmation checks compared to their NS counterparts. In the dyads which NSs and NNSs have equal content knowledge, the NSs emerged as the talkers.

Zuengler's work on conversational interaction has shown that topic expertise may have a positive effect on learner production. Although the results of these studies do provide support for the discourse domain hypothesis, the studies were not designed to test the discourse domain hypothesis.

Woken and Swales (1989) conducted a study to investigate how topic knowledge affects the NS-NNS interaction pattern. Six female subjects participated in the study. Three of them were non-native speakers who were in their final semester before receiving master's degrees in computer science. All of the non-native speakers had extensive experience on IBM Personal Computers with a word processing package called Volkswriter Deluxe. The other three were native speakers who had never used the Volkswriter Deluxe software. They were paired into three dyads, each consisting of one native and one non-native speaker of English. The NNSs who were familiar with Volkswriter were asked to give an introduction to its use to the NSs.
The data were analyzed by counting T-units and computing the average length of T-units for each session during the last ten minutes of each session. It was found that non-native speakers dominated in the overall amount of talk and generally exceeded the native speakers in length of T-unit. In addition, the natives did most of the inquiring. Non-native speakers supplied the native speakers with vocabulary, teaching them key terms from the subject area. They also found that in any of the three conversations, the native speakers did not provide any kind of linguistic help, including help with vocabulary, nor did the non-native speakers solicit any linguistic help from the native speakers.

The Woken and Swales (1989) study has shown that certain factors such as task status and topic expertise can affect the nature of interaction dramatically. However, the scope of this study was somewhat limited because it was based on interactions whose function was instructional. More research on interactions whose functions are other than instructional is needed.

C. Topic familiarity and second language testing

Smith (1989, 1992) examined the role of topic in measuring second language oral proficiency. Subjects of this study consisted of 38 international graduate students majoring in physics, mathematics, and chemistry at the University of Minnesota. Most of them completed a three-week intensive pre-academic international teaching assistant (ITA) training program prior to this
study. ITA training program is designed to prepare international students for teaching assistant (TA) positions for which both general English and field-specific oral language skills are required. In order to be assigned a teaching position, they needed to receive a SPEAK Test score of at least 230 out of a possible 300 points.

Subjects were asked to take both the general topic SPEAK Test and the field-specific version of the test that was designed by the researcher. Both versions of the test consisted of seven sections. 20 subjects took the general topic SPEAK test first and 18 of them took the field-specific test first. The subjects' tests were evaluated for four criteria: comprehensibility; grammar; pronunciation and fluency.

Smith (1989, 1992) found no statistically significant differences between general and field-specific tests on any of the four criteria. There was only a slight difference in the mean scores on the two tests in the areas of comprehensibility, pronunciation, and fluency. Smith (1989) concluded that the factor of topic alone did not bring about significant group differences in the oral competence of second language users.

Similar to Smith (1989), Douglas and Selinker (1992) investigated whether a field-specific oral proficiency test would be a better predictor of field-specific performance than a general purpose oral proficiency test. The subjects of this study consisted of 31 Chinese chemistry graduate students.
They were asked to take three English tests within 24 hours: the general purpose test, the field specific test and a chemistry teaching performance test. The general purpose test is a retired version of SPEAK which is comprised of seven sections and is scored in terms of pronunciation, comprehensibility, fluency, and grammar. CHEMSPEAK, which was used as the field specific test was constructed to have the same format as SPEAK, but the language and instructions were changed to engage subjects in thinking and talking as chemists in an academic situation. The Chemistry teaching performance test took place in a university classroom and consisted of three parts: set-up, five minutes to explain the assigned topic clearly and in words that an undergraduate class could understand, and three minutes of questions on the topic asked by the student questioner. Results suggested that when raters of the performance test were asked to recommend specifically whether or not a subject should be allowed to actually teach chemistry in a lab or classroom, the field specific test was a better predictor than the general purpose test.

In a subsequent study, Douglas and Selinker (1993) also examined variations in the performance on SPEAK and field-specific SPEAK test that they was designed themselves. 15 international graduate students who have taken the SPEAK as part of their evaluation for teaching assistantships within the previous 12 months were asked to take the MATHSPEAK. Among the
subjects, 12 of them were mathematics majors, two were statistics major and one was an economics major.

The results showed that the mathematics students tended to do better on the SPEAK than on MATHSPEAK test. On average, among the six who had taken the SPEAK most recently, comprehensibility scores were 20 points higher on MATHSPEAK than on the SPEAK, though the difference was not statistically significant.

**Summary**

This section has described the research findings on topic-related interlanguage variation. It is clear that research on the topic-related interlanguage variation is in its infancy. Most of studies have shown discourse topics have an impact on the interlanguage production. When speakers talk on the topic of their expertise, they talk more in relation to their interlocutors (Woken Swales, 1989; Zuengler, 1989, 1993) and they take longer and more structured turn (Whyte, 1992, 1994). However, it should be noted that these findings are based on only seventeen studies. And the caution is required in the interpretation of these studies since most of studies involved small numbers of subject and offered impressionistic, rather than systematic analysis of data.
In addition, the research methods employed in some of the studies are problematic. Most of the studies (Selinker and Douglas, 1985, 1986, 1989; Whyte, 1992, Cornu and Delahaye, 1987) are done to examine the discourse domain hypothesis contrasted academic major and life domain topics. And some of the studies (Selinker and Douglas, 1985, 1986, 1989) compared the data elicited by different interviewers (e.g., researcher for the major field topic, subject's friend for the life story topic) or by various tasks (e.g., interview, mini-lecture). In the research design of this sort, it is very likely that an interlocutor factor, task variables or the degree of the cognitive complexity of topics serve as a confounding variable in the study. Research needs to be done to explore the topic-related interlanguage variation.

In the present study, the second language learners' oral performance will be assessed on the basis of the speech production they produce in presentation and natural NS-NNS conversation. The units of analysis chosen for the present study are based on the following review of the research.

LEVEL OF ANALYSIS

I. Syntactic complexity

The first level of analysis involves measurement of syntactic complexity in terms of the T-unit measures. The T-unit was developed by Hunt (1965) as an index of syntactic maturity in the writing and has been used as a research
tool to measure the syntactic complexity of the speech and writing samples in L1 and L2 research (Whyte, 1992, 1993, 1994; Larsen-Freeman, 1978; Perkin, 1980). The inclusion of syntactic variables in the present study thus situates this investigation within previous research. T-units are defined as "the shortest units into which a piece of discourse can be cut without leaving any sentence fragments as residue" (Hunt, 1970, p. 189). Although some of the researchers (Gaies, 1980; Hirsch, 1977) have criticized the use of t-units as a measure of grammatical complexity and pointed out that there is no necessary relationship between syntactic complexity and the overall communicative effectiveness of a speaker's meaning. However, utterances that the more proficient language users produced are usually more syntactically complex than the beginning language learners.

II. Fluency

The analysis of fluency focuses on the temporal aspects of language performance. Fluency is defined by Schmidt (1992) as "automatic procedural skill." He points out that the ability to produce fluent speech to be a skill, "emphasizing the performance aspect of actually doing something in real time rather than the knowledge of how something is to be done"(p. 395). He contrasts fluent speech, which is "automatic, not requiring much attending or
effort" with nonfluent production, which is "effortful and requires a great deal of attention" (p. 358).

Studies by Lennon (1990) and Riggenbach (1991) in which compared native-speaker ratings of fluency in nonnative speech with microanalyses of samples of that speech have shown that speech rate and number of pauses correlated with the listener's perception of fluency. Due to the technical nature of research into pausing in speech production, the present study confines itself to an analysis of speech rate. Following Riggenbach (1991), a measure of words per minute is used. In addition, this study includes the global measure of the amount of talk which have also been used in second language research to gauge learner fluency (Woken & Swales, 1989; Zuengler, 1989; Zuengler and Bent, 1991).

Conclusion

As shown in the previous review of literature, a gap exists between the topic-related variation hypothesis and the empirical evidence that has emerged. The present study attempts to bridge this gap. This study intends to describe and analyze the extent to which L2 learners' oral production is affected by the discourse topic. Their oral performance was judged on the basis of syntactic complexity, fluency and discourse organization. The
measure employed to analyze the data will be presented in detail in the following chapter.
CHAPTER 3

RESEARCH DESIGN AND PROCEDURES

Introduction

A number of methodological problems existing in the area of topic-related interlanguage research were highlighted in the previous chapter. As presented in the Chapter 2, most of the studies (Selinker & Douglas, 1985, 1986, 1989; Whyte, 1992; Cornu & Delahaye, 1987) examining the discourse domain hypothesis contrasted academic major and life domain topics. Additionally, some studies compared the data elicited by different interviewers (e.g., Selinker & Douglas, 1985, 1989) who had a researcher interview the subject on the major field topic, and a research assistant who was a friend of the subject interviewed the subject on the life story topic or by various tasks (e.g., Selinker & Douglas, 1986), who compared the data collected from an interview, and a mini-lecture. In this type of research design, it is likely that an interlocutor factor, task variables may serve as confounding variables in the study.
As mentioned above, most of the studies conducted to investigate the cross-topic variation contrasted subjects' performance on an academic major topic and a life story topic. In so doing, the researchers chose the academic major topic as the domain topic for the subjects according to their educational background. Although to assume that international students can perform better on a topic from their major field than on other general topics seems reasonable, the assumption fails to consider that the input that second language learners get does not necessarily become their output because of the linguistic barrier. Certainly, second language learners can be expected to have extensive knowledge on their major fields. This does not mean, however, that they can always express what they know thoroughly. It is likely that it is the subject who knows which domain or topic with which he/she is most familiar.

To investigate the discourse domain hypothesis, it is necessary to compare interlanguage performance on the domain with performance on general topics. However, the choice of discourse domain topic and general topic should belong to the subject rather than the researcher. In order to avoid an interlocutor factor, data were collected from L2 learners' oral presentations and natural conversation with three interlocutors who had been well-acquainted for a long time. In addition, each subject was asked to talk on more than two topics. The research design of this study involves the elicitation of both domain and general talk from subjects.
Research design

This study was designed to describe the relationship between discourse topics and second language learners’ oral performance and to examine the prediction of the discourse domain hypothesis that language transfer occurs differentially within discourse domains rather than globally across ILs. This study employs both qualitative and quantitative approaches in obtaining and analyzing data in order to have a better understanding of the topic-related interlanguage variation. As Lazaraton (1995) states, “very few researchers design studies that employ both qualitative and quantitative approaches, despite the fact that bimethodologicalism may be a true mark of scholarly sophistication.”

This study consisted of two sets of data: the NS-NNS conversation, and the NNS presentation. The research design required three steps in the collection of presentation data. First, an information form was distributed to the volunteers to elicit information concerning subjects’ topic interests and their language proficiency based on standardized test score results. According to the subject’s responses on the information form, three domain topics and three general topics for each subject were identified and confirmed through interview.

The second stage of data consisted of a mini-presentation. Each subject presented on the topic they have chosen. The presentation was audiotape recorded. The time span of the second stage varied depending on the availability of subjects.
The third stage involved an oral interview with the subjects. Interview was conducted in order to understand how each subject selected both the familiar and unfamiliar topics, the obstacles they experienced in the course of presenting the topics they selected, as well as the perception each subject had toward their performance.

In addition to the presentation data, conversation data were collected. This set of data was collected through conversational interaction between one Chinese subject and a native speaker. The purpose was to examine the role that discourse topics play in a second language learner's oral production in NS-NNS interaction, a task different from oral presentation.

**Method**

**Population and Sample**

The population from which most of the subjects were drawn was comprised of international students studying at The Ohio State University, which has a total student population of approximately 52,000. Of this figure, there are approximately 700 Mandarin-speaking students from Taiwan (Republic of China) and The People's Republic of China. For purposes of this study, the decision was made to select only the students from Taiwan. This decision was made by the researcher in order to obtain a sample that was as homogeneous as possible in terms of the language background.
A total of six subjects participated in this study: three females and three males. All participants in the study were volunteers from a Chinese church and were selected because of the availability of their TOEFL, TSE score, their ethnicity, and their age. They are all native speakers of Mandarin and Taiwanese, and have studied English for at least seven years in Taiwan. English is a required subject in Taiwan from the seventh grade through the twelfth grade. All middle schools in Taiwan use the same textbooks. There are three versions of textbooks for high school students, and each school chooses two of them for its specific educational purpose. After finishing high school, all freshmen in universities and colleges are required to take one more year of English. Therefore, international students from Taiwan studying at The Ohio State University have had at least seven years of formal English instruction.

Biographies of subjects

The following are brief descriptions of the background of each subject.

HY

HY is a male graduate student at The Ohio State University, majoring in Natural Resources, age 33. He had been in the United States for almost two years at the time of the data collection. He is a research assistant in the Natural Resources department. His TOEFL score was 513 and TSE was 230. The domain topics he chose included: marketing management, audio components,
and South Africa. The topics he had a neutral feeling about included computer, art, and music.

SJ
SJ is a 32-year-old male graduate student majoring in environmental education. He has been in the United States for five years. He is currently a teaching assistant in the department of Nature Resources. He had a TOEFL score of 570 and a TSE of 160. His chosen topics included syllabus, mountains, dissertation, linguistics, Turkey, and beauty shops.

SK
SK is a 30-year-old male graduate student majoring in Traffic engineering. He has been in the United States for three years. He scored 535 on TOEFL and 140 on TSE. He is a research assistant in his department. The topics he selected to speak on are planning model, traffic time, influence diagram, sport, computer, American food.

JJ
JJ is a 30-year-old female graduate majoring in foreign language education. She has been in the United States for four years. Her TOEFL and TSE score are 610 and 170 respectively. She chose to speak about music, New Year's Day, a recently read book, having babies, sports and America.
LM

In order to have a low-proficiency level subject within a similar age range as the other selected subjects, LM was approached. She has a Bachelor's degree in nursing and is a housewife of a graduate student. Her age is 31 and she has been in the United States for five years. In order to identify her language proficiency, a retired version of TOEFL was administered to her. Her score was 417. The topics she chose to speak on are babies, pregnancy, an old friend, Africa, swimming, and tea.

MJ

MJ is a 33-year-old female graduate student majoring in communication. She has been in the United States for three and half years. She is a research assistant in her department. She scored 583 on TOEFL and 160 TSE. She chose to speak on following topics: herself, her mom, dissertation proposal, cooking, car, and her brother-in-law.

As described above, the participants of this study included 3 male and 3 female Taiwanese. All of them are in their early 30s and have been in the United States for two years or more.

Data collection

For the purpose of this study, two sets of data were collected: data from NNS presentation and from NS-NNS conversation.
I. Presentation data

The data of NNS presentation were collected individually according to the availability of each individual. The research design requires three steps in the collection of presentation data. First, an information form was distributed to the volunteers to elicit information concerning subjects' topic interests and their language proficiency. Each subject filled out the information form, which included their name, age, the date of arrival in the United States, and their TOEFL and TSE scores. In addition, the participants were asked to list the discourse topics on which they would prefer to talk. They were instructed to write down three topics that they felt were knowledgeable about and that they felt important to themselves and interested in talking about. The subjects were also asked to list three topics about which they felt neutral and with which they were not familiar with. The researcher later met with subjects to reconfirm the topics each subject chose and to interview them concerning the process they went through in choosing topics. The domain topics and the general topics that each subject chose are presented in Table 4.

The second stage of data collection consisted of a mini-presentation. After identifying the domain topics and general topics of each subject, each subject gave a presentation on the topic they chose. In order to avoid fatigue, each subject was asked to present to the researcher about one topic per
meeting which lasted from five to ten minutes. Subjects were allowed to use notes as desired. The presentation was audiotape recorded.

The third stage involved an oral interview with the subjects after each presentation. This interview included questions concerning their processes of selecting the topic and of presenting on the topic.

II. Conversation data

In addition to presentation data, conversation data were collected. The decision was made to collect conversation data from one subject instead of all six subjects because of the researcher's belief that in order to avoid the interlocutor effect, the subject should be well-acquainted with other interlocutors so that she/he is willing to talk. Among six subjects, only subject JJ who has a close American friend met this requirement. Hence, this set of data was collected through only one Chinese subject's (subject JJ) conversational interaction with a native speaker and another non-native speaker. They were well-acquainted with each other. They met with each other once a week and talked about six different topics. The topics included New Year's Day, pronunciation, religion, sports, Singapore, and the ESL program. The length of conversation on each topic ranged from eight minutes to 25 minutes. The degree of subject JJ's familiarity on each of the conversation topics was confirmed through interviews after the conversation. This data were collected
with the attempt of comparing the effect of discourse topics on subject JJ’s oral performance between NS-NNS conversation and presentation.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Domain topics</th>
<th>General topics</th>
</tr>
</thead>
</table>

Table 3.1. Domain and General topics each subject chose
Data analysis

I. Preparation of data

Each subject’s oral utterances was first audiotape recorded and then transcribed by the researcher. All speech collected from the NS-NNS conversation and the NNS presentation was transcribed verbatim. (see Appendix B).

II. Units of analysis

To investigate how the discourse topics affected the second language learner’s oral production, the data were analyzed in terms of fluency, grammatical accuracy and grammatical complexity. The overall length of speech and the rate of speech were calculated in order to examine the correspondence between discourse topics and the fluency of L2 learner’s speech. To investigate the impact of discourse topic on the grammatical complexity of L2 learner’s oral production, the number of T-units, mean length of T-units, mean length of error-free T-units were calculated. To examine the relationship between the discourse topics and the grammatical accuracy of second language learner’s oral production, the grammatical errors of subjects’ speech were identified first by the researcher and then checked by a native
speaker of English. The error rate was calculated by dividing the total numbers of errors identified by the total number of T-units.

To examine whether the language transfer occurs differentially across domains, the omission of final stops /p/,/b/,/t/,/d/,/k/,/g/ was examined.

III. Analytical system

a. Fluency measures

Fluency was measured in terms of total speech time and speech rate. Speech time for the subjects was measured in terms of speech time (minutes plus fractions in hundredths), the total time spent by the speaker on each topic. Talk on each topic was timed in its entirety for both conversation data and presentation data. Then, for the conversation data, the Chinese subject's turn was timed from the end of the preceding interlocutor's turn to the beginning of the following one. Mean turn length was calculated by dividing the total time at talk of the subject by the number of turns the subject took. The speech rate for each topic was calculated by dividing the total time at talk by the total number of words and T-units produced. For purposes of this study, the filler pauses, such as "uh" and "um" were excluded in the word count.
b. Syntactic complexity measures

The subject's syntactic complexity was measured in terms of the total number of T-units, the mean length of T-units, and mean length of error-free T-units. The analysis of syntactic complexity began with dividing the transcription data into T-units. This analysis uses Hunt's (1970) definition of the T-units as an independent clause plus all associated dependent clauses. The utterance of HY will serve to illustrate the process by which subjects' speech is divided into T-units. His utterances “I have been to South Africa for one year. And I went there because I got a scholarship from the government of South Africa.” were coded as two separate T-units, indicated by slashes. The mean length of T-units was calculated by dividing the total numbers of words of each subject on each topic by the total number of T-units on each topic.

For purposes of this study, Scott and Tucker's (1974) definition of error-free a T-unit was employed. According to Scott and Tucker, for a T-unit to be considered error-free, it must not contain morphological or syntactic errors. The grammatical errors of each subject's utterances were first identified by the researcher and then checked by a native speaker of English.

C. Discourse measures

The discourse organization of the conversation data was analyzed in terms of turn taking patterns in which the number of turns each speaker took was
counted. In addition, in order to further investigate how actively the Chinese subject participated in the interaction, the systematic classification and the coding system proposed by van Lier (1988) were used.

Van Lier suggested that “turn taking” is the essential element of participation and he distinguishes four basic ingredients in turn taking:

(1) transition: particularly, turn progression and turn size;
(2) distribution: particularly, speaker selection, allocation;
(3) prominence: the status of a turn as attended-to action; and
(4) initiative: voluntary participation (i.e., actor-originated) in the goings on (van Lier, 1988, p. 107)

He argued that transition and distribution are directly observable, and thus are easily translated into classification criteria. However, prominence and initiative are related to intentions and perceptions of participants and hence are not directly observable. They are rated on the basis of observed actions.

In order to further examine how actively the subject participated in the interaction, the identification of the learner’s initiative in the conversation is crucial. Identifying whether a turn is allocated or self-selected, whether a turn is allocating the next turn, or whether there is any new information (i.e., new topics) given in a turn and how a turn-taking can reflect an attempt to set up, change or close a series of sequentially related turns, allows us to have a clearer understanding of the status of each learner’s participation in the
interaction. Van Lier provided the following series of questions in four
categories which permit a detailed coding for active participation:

(i) Topic: Is the turn or turn-part off-stream; does it introduce
something new? or does it deny/dispute a proposition or
request of a prior turn?

(ii) Self-selection: Does selection to speak originate from this
speaker?

(iii) Allocation: Is it part of the work of this turn or turn-part that is
selects from among those present one specific next speaker?

(iv) Sequence, Activity: Is the turn or turn-part part of a sequence
turns? If yes, is it (a) first part or (b) closing part)? Or is the
turn or turn-part independent of sequence, but not a
listening response, OK-pass, or neutral turn?

A turn will then be given a star if its nature is consistent with the
description of the coding system. Any turn may thus be identified by one or
more stars. The status of participation in the Excerpt 1 can, therefore be coded
in the following manner:
<table>
<thead>
<tr>
<th>Area</th>
<th>Turn</th>
<th>Speaker</th>
<th>Speech</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>A</td>
<td>I did in this m: order yea?</td>
</tr>
<tr>
<td></td>
<td>22-24</td>
<td>E</td>
<td>m yes all right.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>A</td>
<td>What do you think?</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>D</td>
<td>the same but eh: I think that the main problem in the future is that eh: we</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>A</td>
<td>uuhh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>have eh: m: our English well my English or our English is very shortage.. in knowledge no? as a language ehm: I think that ... in the main problem is for writing...</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>A</td>
<td>maybe for you</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>D</td>
<td>yeah</td>
</tr>
</tbody>
</table>

Excerpt 1. The status of participation

This aspect of analysis were done by the researcher and another graduate student in order to increase the credibility of the analysis. Both of them reviewed the data together to assign the star value for each turn. The total turns and total value of stars of the Chinese subjects were computed. The total
number of turns which one contributed to the activity was the quantity index of one's participation. The total value of stars one obtained was the quality index of one's participation. In order to investigate how one participant performs in the activity in a more holistic manner, a compound index based on these two sets of information was established, following the formula suggested by van Lier (1988).

Formula 1. \[ PI = (PL) \times (%TT) \]

where

PL (Participation level) = total value of stars/total numbers of effective turns

%TT (or percentage total turns) = (total individual turns/total class turns)\%

Computation procedures of PI

The Participation Index computed using this formula takes both the quantity and the quality of one's verbal contribution into consideration. The scores shown in Excerpt 1 were used as an example to demonstrate how PI is computed for speaker A in this conversation. The total turns produced in this interaction are 9 and the total turns taken by speaker A are 4. The total value of stars speaker A obtained is 11. Therefore,

Speaker A's %TT = (4/9)100 = 44.44%

Speaker A's PL = 11/4 = 2.75

Speaker A's PI = (2.75) (44.44) = 336.0775
The subject's PI across topics were compared in order to reveal the nature of the overall participation in the selected activities. In addition, the subject's participation in the four initiative categories (i.e., topic, self-selection, allocation and sequence) was compared to determine the distribution of an individual participant's involvement in different initiative areas.

**Pilot study**

Pilot testing of the experimental procedures took place during the Summer Quarter, 1996. The subject in this study was a female graduate student majoring in Journalism. She was asked to present on one topic with which she is very familiar and interested in and another topic on which she has neutral feeling.

The data were analyzed in terms of T-unit counts and overall length of the speech. It was found that the subject produced more talk on the topic she is interested in than on the general topic. Moreover, the pilot study also provided valuable information for an improved method for data elicitation. The subject expressed her difficulty in choosing a neutral topic. Hence, minor modifications were made to the procedures during which the data were collected.

For the present study, the subjects were instructed to choose three “unfamiliar topics”, instead of topics on which they have neutral feeling.
CHAPTER 4

RESULTS OF DATA ANALYSIS

Introduction

The area of topic-related interlanguage variation has been under-researched. The research findings concerning the effect of discourse topics on second language learner's oral performance are inconclusive because of the limited amount of the literature on this issue. The present study investigated the effect of discourse topics on second language learner's oral performance. This research had three specific purposes: (1) to describe the relationships between discourse topics and a second language learner's participation in NS-NNS conversation (2) to describe how discourse topics influence second language learner's oral performance and (3) to examine whether SLA processes such as language transfer take place differentially within discourse domains, as held in the discourse domain hypothesis advanced by Selinker and Douglas (1985).

To examine the relationship between the topic familiarity and the second language learner's participation in conversation, the turn-taking patterns in the NS-NNS conversation data were examined.
To assess how the discourse topic affects second language learner’s oral production, the data were analyzed in terms of fluency and grammatical complexity. The overall length of speech, and the rate of speech, were calculated in order to examine the correspondence between discourse topics and the fluency of L2 learners’ speech. To investigate the impact of discourse topic on the grammatical complexity of L2 learners’ oral production, the mean length of T-units and the mean length of error-free T-units were calculated. To answer the final research question, with regard to the language transfer in learners’ interlanguages across topics, omission of the final consonants was examined.

The first and second sections of this chapter present the results of analysis concerning how discourse topics affect a second language learner’s oral production on conversation and presentation. This section is then followed by a report on the interview with the subjects concerning issues such as how topics were chosen, what difficulty they encountered in the presentation of familiar topics and unfamiliar topics.
I. CONVERSATION DATA

A. Discourse organization: Turn-taking patterns

The discourse organization in the conversation data was analyzed in terms of the turn-taking patterns of the Chinese subject. For the purpose of this study, the speech production of all speakers in the conversation were analyzed as an indirect indication of how the Chinese subject performed in comparison with other interlocutors. However, only the oral performance of the Chinese subject is discussed.

As Table 1 shows, the Chinese subject’s turn-taking patterns varied across topics. Among six topics, the variance exists more on the topics of “New Year Day,” “pronunciation,” and “sport.” The Chinese subject engaged in the discussion of the topics of “New Year’s Day” and “pronunciation.” The turns she took on these two topics are either equal to (i.e., New Year’s Day (42:42)), or more than the native speaker of English (i.e., Pronunciation (31:29)). However, she was relatively quiet on the topic of “sport” and took only ten turns out of seventy. On the topics of “religion,” “Singapore” and “ESL program,” even though the native speaker seemingly dominated the conversation, the Chinese subject’s participation was active compared with her participation in the topic of “sports.”

As far as the total amount of words is concerned, Table 2 illustrates the cross topic variation on the subject’s oral production. As shown in Table 2, the total amount of words she uttered on the topic of “New Year’s Day” and
"pronunciation" are even more than that of the native speaker's which supports the results of her turn-taking patterns. As mentioned earlier, she participated actively on these two topics based on the analysis of her turn-taking pattern. Both Table 1 and Table 2 revealed that the Chinese subject not only actively took turns to participate in the conversation on the topic of "New Year's Day" and "pronunciation" but also talked at length on these two topics in terms of total amount of words. Similarly, the total amount of words she uttered on the topic of "sports" parallels to her turn-taking pattern in that topic. She was relatively quiet on the topic of "sports" about which she was not knowledgeable.
<table>
<thead>
<tr>
<th>Topics</th>
<th>Time (Min)</th>
<th>Total amount of verbal exchanges</th>
<th>The amount of turns taken by Chinese student</th>
<th>The amount of turns taken by Japanese student</th>
<th>The amount of turns taken by NS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>9:20:41</td>
<td>126</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>17:18:24</td>
<td>78</td>
<td>31</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>RELIGION</td>
<td>27:47:31</td>
<td>86</td>
<td>33</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>SPORTS</td>
<td>6:20:69</td>
<td>70</td>
<td>10*</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>11:00:88</td>
<td>84</td>
<td>19</td>
<td>28</td>
<td>37</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>10:38:34</td>
<td>54</td>
<td>20</td>
<td>11</td>
<td>23</td>
</tr>
</tbody>
</table>

Table 4.1. Turn-taking pattern of Chinese subject
<table>
<thead>
<tr>
<th>Topics</th>
<th>Time</th>
<th>Total number of words in conversation</th>
<th>Total number of words in Chinese student’s utterance</th>
<th>Total number of words in Japanese student’s utterance</th>
<th>Total number of words in NS’s utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR’S DAY</td>
<td>9:20:41</td>
<td>1195</td>
<td>445</td>
<td>381</td>
<td>369</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>17:18:24</td>
<td>2143</td>
<td>757</td>
<td>710</td>
<td>676</td>
</tr>
<tr>
<td>RELIGION</td>
<td>27:47:31</td>
<td>3468</td>
<td>947</td>
<td>319</td>
<td>2202</td>
</tr>
<tr>
<td>SPORTS</td>
<td>6:20:69</td>
<td>814</td>
<td>112</td>
<td>328</td>
<td>374</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>11:00:88</td>
<td>1420</td>
<td>374</td>
<td>315</td>
<td>731</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>10:38:34</td>
<td>1147</td>
<td>299</td>
<td>176</td>
<td>672</td>
</tr>
</tbody>
</table>

Table 4.2. Number of words uttered by Chinese subject
Table 3 presents the average number of words uttered by participants per turn. As Table 3 shows, the Chinese subject's turns were longer on the topics of "religion" and "pronunciation" (i.e., 31.57, and 24.41 words per turn respectively) than on the other topics. With regard to her performance on the topic of "sports," even though she was relatively quiet in terms of her turn-taking pattern and the total amount of words uttered, the length of her turn on the topic of "sports" is not the shortest among the six topics. Interestingly, the length of her turn was shortest on the topic of "New Year's Day," in which she participated very actively in terms of analysis of the turn-taking patterns. This indicates that subject may either take a lot of turns but only hold the floor for a short amount of time or else take less turns and hold the floor longer.

The native speaker apparently spoke extensively on each turn in the discussion on the topic of religion. However, this may be due to the nature of this particular conversation. During the conversation, the Chinese subject and another interlocutor brought up some controversial issues such as "How can one believe in something he can not see?" or "Can a Chinese Christian worship his or her ancestors?". The native speaker talked at length in the conversation because he needed to answer all these questions and help them to think through all these issues.
Table 4.3. Average number of words uttered per turn (total number of words/total number of turn)

<table>
<thead>
<tr>
<th>Topics</th>
<th>Chinese student</th>
<th>Japanese student</th>
<th>Native speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>10.6</td>
<td>9.07</td>
<td>8.79</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>24.41</td>
<td>39.44</td>
<td>23.31</td>
</tr>
<tr>
<td>RELIGION</td>
<td>31.57</td>
<td>15.95</td>
<td>61.17</td>
</tr>
<tr>
<td>SPORT</td>
<td>11.2</td>
<td>11.71</td>
<td>11.69</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>19.68</td>
<td>11.25</td>
<td>19.76</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>14.95</td>
<td>16</td>
<td>29.22</td>
</tr>
</tbody>
</table>

Figure 4.1. Average number of words uttered per turn
The data collected from the interview with the subject and her response to the native speaker in the conversation can provide answers to account for her various participation patterns across topics. In the interview and in her conversation, she clearly indicated that she was not interested in and familiar with the topic of "sports." In the conversation, after being left out of the conversation a discussion of an Ohio State-Indiana basketball game for almost three minutes (total conversation time for the topic of sport: 6.34 minutes), the native speaker finally invited her into the conversation by asking "have you been to a basketball or football game?" to which she replied "no." She further explained to them "I am not interested. I don't understand.... the weather is so cold, why didn't they just stay at home and watch?" In the interview, she responded to the researcher concerning the reason why she was quiet on the discussion of the topic of "sports": "I don't know much about it and I don't have much to say.... I am not a sports fan. I don't like football because it's too violent."

In the conversation on "New year's Day," the theme centered on comparing of the New Year's celebration in Taiwan with that in Japan. Apparently, among three of them, the Chinese subject was familiar with this topic area and able to contribute to the conversation. In the topic of "pronunciation," they discussed whether keeping identity is a good explanation on the case of second language learner's unwillingness to change his or her accent and about their goal in learning English. In the interview, she revealed that she was very interested in this topic
because the topic was related to her major and herself as a second language learner.

In addition to the quantity of turns, the quality of the turns the Chinese subject took was analyzed. In order to further examine how actively the subject participated in the interaction, the identification of the learner's initiative in the conversation is crucial. The analytical system proposed by van Lier (1988) was employed to examine the implication of different turn-taking actions. His analytical system enables the researcher to identify whether a turn is allocated or self-selected, whether a turn is allocating the next turn, whether there is any new information (i.e., new topics) given in a turn and how a turn-taking can reflect an attempt to set up, change or close a series of sequentially related turns (the computation formula is depicted on the Chapter 3). In so doing, not only can the quantity of turns but also the quality of turns the subject took be obtained, which allows us to have an insightful understanding of the status of the subject's participation in the interaction.

Table 4 presents the quantitative results of the Chinese subject's overall participation across topics. The second column illustrates the percentage of the total number of turns the Chinese subject took across topics. The third and fourth columns show the participation level and participation index of the Chinese subject across topics. The last column of the table shows a rank order based on the Chinese subject's participation across topics.
As shown on Table 4, in terms of the quantity of turns, the Chinese subject contributed most on the topic of "pronunciation" (39% of the total turns) followed by the topics of "ESL program" (37.04%), "religion" (34.88%), "New Year's Day" (33.33%), "Singapore" (22.62%) and "sports" (14.29%). In terms of the quality of the turns, the Chinese subject obtained the highest participation value on the topic of "pronunciation" (44.95 PV) followed by the topic of "New Year's Day" (44.94), "religion" (37.8), "Singapore" (26.03), "ESL program" (25) and "sports" (9). When taking both the quantity of turns and the degree of initiative the turn implied into account, the Chinese subject participated most actively on the topic of "pronunciation" with a participation index of 83.55. The rank of her participation across topics decreased on the topic of ESL program, religion, Singapore, New Year's Day and sports. Table 4 reveals that with or without considering the implication of each turn changed the subject's participation rank on the topics of "New Year's Day" and "Singapore."
<table>
<thead>
<tr>
<th>TOPICS</th>
<th>TOTAL TURN</th>
<th>%TT(rank)</th>
<th>PART. LEVEL (PL) &amp; PART VALUE (PV)</th>
<th>Part. Index (PI)</th>
<th>PI rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>42(126)</td>
<td>33.33(4)</td>
<td>1.07 44.94 (2)</td>
<td>38.16</td>
<td>5</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>31(78)</td>
<td>39.74(1)</td>
<td>1.45 44.95 (1)</td>
<td>83.55</td>
<td>1</td>
</tr>
<tr>
<td>RELIGION</td>
<td>30(86)</td>
<td>34.88(3)</td>
<td>1.26 37.8 (3)</td>
<td>55.38</td>
<td>3</td>
</tr>
<tr>
<td>SPORTS</td>
<td>10(70)</td>
<td>14.29(6)</td>
<td>0.9 9 (6)</td>
<td>11.57</td>
<td>6</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>19(84)</td>
<td>22.62(5)</td>
<td>1.37 26.03 (4)</td>
<td>42.46</td>
<td>4</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>20(54)</td>
<td>37.04(2)</td>
<td>1.25 25 (5)</td>
<td>57.88</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 4.4. Overall Participation across topics
In addition to actively taking turns to participate in the conversation, the Chinese subject often initiated new sub-topics by asking other interlocutors questions on the topic about which she was familiar (i.e., New Year Day, pronunciation, and religion), which rarely happened in the topic of "sports." In the conversation on the topic of "sports" and "Singapore," she only passively answered the questions that were asked by other interlocutors.

In order to further investigate how the Chinese subject was involved across topics in different areas of initiation, tables were constructed based on the subject's participation value received in the categories of topic work, self-selection,
allocation, and sequencing of discourse. Analysis of categorical participation permits the researcher to identify whether there was a discourse pattern for the subject to initiate when speaking on different topics. The participation values of the Chinese subject were converted to percentage values for comparison purposes.

Table 5 summarizes how the Chinese subject performed across topics in the four initiative categories, while Figures 3 and 4 provide a graphical comparison of the percentage differences across topics and across four categories. As shown in Figure 3, in the area of topic initiation, a comparison of participation percentages shows that the Chinese subject did more topic work (initiating new sub-topics, bringing new information) on the topic of “pronunciation,” “religion” and “New Year’s Day” than on the rest of the topics. As far as self-selection is concerned, she participated more actively on the topic of “pronunciation” and “religion.” With regard to the area of allocation, as shown in Figure 3, the quantitative difference in terms of percentage value across topics in this area was dramatic between the highest and the second highest participation value. The Chinese subject did more allocation of speakers on the topic of “pronunciation” (52.94%). The next highest percentage value of allocation was 27.27% on the topic of “New Year’s Day.” Her difference in the area of allocation across topics revealed a topic-related variation on the Chinese subject’s participation. When she was familiar with a topic, she was more engaged in the
topic, which was illustrated by the fact that she did much more allocating of next 
speakers on the topic of "pronunciation" than the rest of the topics. Concerning 
the sequencing of discourse, the results showed that the Chinese subject did more 
sequencing work, again, on the topic of "pronunciation."

As Figure 3 shows, on the topic of "pronunciation," which she was familiar 
with and interested in, her categorical performance was high on every category, 
which indicates that she actively interacted with other interlocutors by specifying 
speakers of next turns, volunteered to respond to the interlocutor frequently, and 
contributed to the topic development. Similarly, her categorical performance was 
low on every category on the topic of "sport" which she did not know much about 
and didn’t have much to say. On the remaining four topics: "New Year’s Day," 
"religion," “Singapore” and “ESL programs,” her categorical performance varied. 
Generally speaking, she did least allocation work among four areas of initiation on 
these four topics.
Table 4.5. Categorical Participation across topics

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>A (INTRODUCE NEW TOPIC) (%)</th>
<th>B (SELF-SELECTION) (%)</th>
<th>C (ALLOCATION) (%)</th>
<th>D SEQUENCE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>43.24</td>
<td>26.15</td>
<td>27.27</td>
<td>42.86</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>45.83</td>
<td>47.05</td>
<td>52.94</td>
<td>69.23</td>
</tr>
<tr>
<td>RELIGION</td>
<td>45.5</td>
<td>36.17</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>SPORTS</td>
<td>8.5</td>
<td>12.2</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>39.13</td>
<td>25.53</td>
<td>11.1</td>
<td>36.36</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>36.36</td>
<td>28.13</td>
<td>7.69</td>
<td>38.89</td>
</tr>
</tbody>
</table>

Figure 4.3. Categorical participation across topics
Both the quantitative and qualitative data have shown that the discourse topics do affect second language learner's conversational participation. A subject's willingness to participate in a conversation depends on the degree of her familiarity with the topic. The results of this analysis of turn-taking patterns across topics in natural conversation echo the findings of other topic-related interlanguage variation studies conducted in different research contexts.

B. SYNTACTIC COMPLEXITY

In this section, the effect of topic knowledge on learners' syntactic complexity is measured in terms of the mean length of T-units and the mean length of error-free T-units. The analysis of syntactic complexity began with dividing the
transcription data into clauses and T-units. This analysis uses Hunt's (1970) definition of a T-unit as an independent clauses plus all associated dependent clauses. The results are shown in the following tables.

As shown in Table 6, cross-topic variation in grammatical complexity for this subject was observed among topics. The Chinese subject’s average length of T-units on the topic of "sport," about which she was not knowledgeable, is much shorter (8.6 words) than that on the rest of the topics. Unlike the Japanese student, the overall syntactic complexity of the Chinese student measured by the mean length of T-units varied dramatically across topics. Her shortest mean length of T-units was on the topic of “sports” (8.6 words) about which she was not knowledgeable, and the longest on the topic of “pronunciation” (13.52 words). Compared with the Chinese student, it seems that the overall syntactic complexity of the Japanese student’s speech is less affected by the topic variable. Even on the topic she is not familiar with (i.e., religion), the average length of her T-units did not vary dramatically.

In comparing the Chinese subject's average length of T-unit with her participation rank shown on Table 6, the average length of T-unit in her speech production is highly correlated with the participation rank, except for the topic of “New Year’s Day” and “religion.” In other words, the degree of syntactic complexity of the Chinese subject's oral production changed according to her interests or involvement in the discourse topics.
Table 4.6. Average length of T-units and of error-free T-units

<table>
<thead>
<tr>
<th>Topics</th>
<th>Chinese student (rank) [participation rank]</th>
<th>Japanese student</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>10.85(3)[5], 10.11</td>
<td>8.2</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>13.52(1)[1], 13.54</td>
<td>10.6</td>
</tr>
<tr>
<td>RELIGION</td>
<td>10.29(5)[3], 10.31</td>
<td>8.1</td>
</tr>
<tr>
<td>SPORTS</td>
<td>8.6(6)[6], 7.71</td>
<td>8.3</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>10.39(4)[4], 8.88</td>
<td>8.5</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>11.5(2)[2], 9.7</td>
<td>8.43</td>
</tr>
</tbody>
</table>

Figure 4.5. Average length of T-units
C. ACCURACY

To measure grammatical accuracy, the grammatical errors in the subject’s oral production were first identified by the researcher and then checked by a native speaker of English. The error rate on each discourse topic was calculated by dividing the total number of errors made in each topic by the total number of T-units. For instance, on the topic of “New Year’s Day,” her total of 14 errors divided by the T-units total of 41 results in a rate of 0.34 errors per T-unit.

As shown in the Table 7, the subject’s accuracy rate varied across topic. She produced the least accurate speech on the topic of “sports” (i.e., 0.76 errors per T-unit), which she was not familiar with or interested in. Her grammatical error rate was high (i.e., 0.51 errors per T-unit) on the topic of “pronunciation” in which her participation level was highest among topics. On the rest of the four topics: “ESL program,” “New Year’s Day,” “Religion” and “Singapore,” the cross-topic variation in grammatical accuracy was not as distinct as the topic of “sports” and “pronunciation.”
Table 4.7. Error rate across topics

<table>
<thead>
<tr>
<th></th>
<th>New year's day</th>
<th>Pronunciation</th>
<th>Religion</th>
<th>Sports</th>
<th>Singapore</th>
<th>ESL program</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-units</td>
<td>41</td>
<td>56</td>
<td>92</td>
<td>13</td>
<td>36</td>
<td>26</td>
</tr>
<tr>
<td>Total Error</td>
<td>14</td>
<td>29</td>
<td>30</td>
<td>10</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Error rate</td>
<td>0.34</td>
<td>0.51</td>
<td>0.33</td>
<td>0.76</td>
<td>0.39</td>
<td>0.31</td>
</tr>
</tbody>
</table>

D. FLUENCY

Fluency is measured in terms of time at talk and speech rate. Talk on each topic is timed in its entirety, then the Chinese subject's turn is timed from the end of the preceding interlocutor's turn to the beginning of the following one. The time at talk for the subject was measured in terms of speech time, the total time spent by the speaker on each topic. Mean turn length is calculated by dividing the total time at talk by the number of turns the subject took. The speech rate for each topic is calculated by dividing the total learner time at talk by the total number of words and t-units produced. For the purpose of this study, the filled pauses,
such as "uh" and "hmm" were excluded in the word count. The results are presented in Tables 8 and 9.

The results of the fluency analysis manifested cross-topic variation. Interestingly, as Table 8 shows, the Chinese subject produced the highest speech rate on the topic of "New Year's Day" instead of "pronunciation," which she was the most interested in, and familiar with and in which she participated most actively in terms of turn-taking pattern. Her speech rate on the topic of "sports" is lowest in terms of measuring the total amount of words per minute, which is parallel to her participation level. However, when the speech rate is measured in terms of T-units produced per minute, the number of t-units produced per minute on the topic of "sports," as shown in the Table 9, was not the least among the topics.

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>AMOUNT OF WORD UTTERED BY CHINESE STUDENT PER MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>148.82(1)</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>144.19(2)</td>
</tr>
<tr>
<td>RELIGION</td>
<td>117.05(5)</td>
</tr>
<tr>
<td>SPORTS</td>
<td>115.46(6)</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>131.22(4)</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>135.29(3)</td>
</tr>
</tbody>
</table>

Table 4.8. Amount of words/per minute
Table 4.9. Numbers of T-units per minutes

<table>
<thead>
<tr>
<th>Topics</th>
<th>Total numbers of t-units</th>
<th>numbers of t-units per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW YEAR'S DAY</td>
<td>41(2:59:41)</td>
<td>13.71(1)</td>
</tr>
<tr>
<td>PRONUNCIATION</td>
<td>56(5:15:15)</td>
<td>13.66(2)</td>
</tr>
<tr>
<td>RELIGION</td>
<td>92(8:05:51)</td>
<td>11.37(6)</td>
</tr>
<tr>
<td>SPORTS</td>
<td>13(1:03:12)</td>
<td>12.32(4)</td>
</tr>
<tr>
<td>SINGAPORE</td>
<td>36(2:50:87)</td>
<td>12.63(3)</td>
</tr>
<tr>
<td>ESL PROGRAM</td>
<td>26(2:12:37)</td>
<td>11.76(5)</td>
</tr>
</tbody>
</table>

Table 10 indicates the amount of time the Chinese subject spoke on each topic and the average length of the turns she took. With regard to the measure of speech time, the Chinese subject spent more time on the topics of "New Year's Day," "pronunciation" and "religion." She took up 35.51% of the time in the conversation on the topic of "New Year's Day," 30.33% on the topic of "pronunciation" and 29.12% of the time on the topic of "religion." Again, the
Chinese subject had the shortest speech time on the topic of “sports” (16.58% of total time).

The variation in the average turn length across topics was also apparent. However, the pattern which emerged was not paralleled to the subject’s participation level. As shown in Table 10, the subject’s average turn length was longest on the topic of “religion” (16.18 sec), followed by the topics of “pronunciation” (10.16), “Singapore” (8.99), “ESL program” (6.62), “sports” (6.31) and “New Year’s Day” (4.73) respectively. It is interesting that the average turn length was shortest on the topic of “New Year’s Day,” in which her fluency measure was the highest and participation rank in terms of quantity of turn-taking was second.

<table>
<thead>
<tr>
<th>Topic</th>
<th>New Year’s Day</th>
<th>Pronunciation</th>
<th>Religion</th>
<th>Sports</th>
<th>Singapore</th>
<th>ESL program</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME (sec)</td>
<td>560.41</td>
<td>1038.24</td>
<td>485.51</td>
<td>380.69</td>
<td>660.88</td>
<td>638.34</td>
</tr>
<tr>
<td>Chinese %</td>
<td>199</td>
<td>315</td>
<td>29.12</td>
<td>63.12</td>
<td>170.87</td>
<td>132.37</td>
</tr>
<tr>
<td>TURN Chinese</td>
<td>42</td>
<td>31</td>
<td>30</td>
<td>10</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Average turn length</td>
<td>4.73</td>
<td>10.16</td>
<td>16.18</td>
<td>6.31</td>
<td>8.99</td>
<td>6.62</td>
</tr>
</tbody>
</table>

Table 4.10. Time at talk
E. The omission of the final stops

To investigate whether SLA processes such as language transfer occurs differentially across domains, one aspect of language transfer — the omission of the final stops was examined. The final stops /p/, /b/, /t/, /d/, /k/, /g/ were first identified and then the total number of the final stops counted. Second, the pronunciation of each word containing these final stops was checked for each topic. The ambiguous cases were then examined through a spectrogram.

Table 11 reveals that the Chinese subject has the highest percentage of final stops deletion (54%) on the topic she was least familiar with, followed by the topic of ESL program (49%), religion (33%), pronunciation (32%), Singapore (30%) and new year’s day (22%) respectively. The results seem to indicate that the degree of first language interference on second language learners’ oral production differs between familiar topics and unfamiliar topics.
<table>
<thead>
<tr>
<th>TOPICS</th>
<th>/p/ /b/ /t/ /d/ /kd/ /g/</th>
<th>Total final stops</th>
<th>/p/ /b/ /t/ /d/ /kd/ /g/</th>
<th>% of deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>New year’s Day</td>
<td>0 0 52 27 17 2</td>
<td>98</td>
<td>0 0 14 8 0 0</td>
<td>22%</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>7 0 113 24 17 0</td>
<td>161</td>
<td>2 0 42 7 1 0</td>
<td>32%</td>
</tr>
<tr>
<td>Religion</td>
<td>9 0 126 52 24 0</td>
<td>211</td>
<td>0 0 44 24 1 0</td>
<td>33%</td>
</tr>
<tr>
<td>Sports</td>
<td>1 0 21 14 3 0</td>
<td>39</td>
<td>0 0 11 10 0 0</td>
<td>54%</td>
</tr>
<tr>
<td>Singapore</td>
<td>0 0 65 27 17 0</td>
<td>109</td>
<td>0 0 25 8 0 0</td>
<td>30%</td>
</tr>
<tr>
<td>ESL program</td>
<td>1 0 32 14 12 0</td>
<td>59</td>
<td>0 0 18 10 1 0</td>
<td>49%</td>
</tr>
</tbody>
</table>

Table 4.11  The percentage of final stops omission.
II. PRESENTATION DATA

The presentation data were collected from a total of six participants from Taiwan with diverse academic majors. Each of the subject was asked to give a five to ten minute talk on six topics, three of which were familiar and three of which were not. The identification of familiar and unfamiliar topics was accomplished as follows: participants were instructed to list three topics that they were knowledgeable about, and interested in and three other topics they were not familiar with in the information form. The transcripts of the presentations were analyzed in terms of grammatical complexity, fluency and accuracy.

A. Grammatical complexity

The grammatical complexity of the subjects' oral production was measured by computing the mean length of T-units. The Wilcoxon Matched-Pairs Signed-Ranks Test was computed to examine the differences. The means in Table 12 show that the overall mean length of T-units produced by the subjects was 12.79 words for familiar topics and 11.25 words for unfamiliar topics. The Wilcoxon Matched-Pairs Signed-Ranks Test did not detect a significant difference between the two types of topics, $z=-1.5724$, $p > 0.05$.

Although the cross-topic variation in grammatical complexity was not obvious, the length of T-units that subjects produced on the familiar topics was, generally speaking, slightly longer that that on the unfamiliar topics except for the
subject HY. Interestingly, the shortest mean length of T-units that subject HY produced was on one of the familiar topics (topic 3: 9.37 words).

Even though little cross-topic variation in grammatical complexity measured by the length of T-units was observed when consolidating the six topics as two large categories, cross-topic variation did arise in several individual subjects (i.e., subjects SK, HY, JJ, SJ) if comparing the subject’s performance across each topic. For instance, differences between the length of T-units on subject SK’s Topic 1 (familiar topic: 20.80 words) and Topic 3 (unfamiliar topic: 9.38 words) were striking. Similarly, the length of T-unit the subject HY produced on the familiar topic 1 (19.10 words) was much longer than that on the unfamiliar topic 1 (12.35 words).

As far as the variation in the grammatical complexity across topics is concerned, the variation in the mean length of T-units on the familiar topics was close to that on unfamiliar topics. The results of the Wilcoxon Matched-Pairs Signed-Ranks test revealed no significance on subjects’ variation across topics, \( z = -1.7821, p > 0.05 \).

Concerning individual variation across topics, the data show that the variation among the three unfamiliar topics was much smaller than that on the three familiar topics except for the subject MJ, whose variation on the unfamiliar topics was greater than that on the familiar topics.
In addition to the mean length of T-units, the mean length of error-free T-units was calculated. Table 13 illustrates that subjects produced the error-free T-units having a mean length of 10.37 words on the familiar topics, and the mean length of 7.78 words on the unfamiliar topics. The Wilcoxon Matched-Paired Signed Rank Test detects a significant difference on subjects' performance between the two types of topics, \( z = -2.2014 \), \( p < 0.05 \). The mean length of error-free T-units was longest, again, on one of the familiar topics for all subjects. Among six subjects, only two of them (i.e., SK, SJ) had longer mean length of error-free T-units on all three familiar topics than the other three unfamiliar topics. Table 13 also reveals the standard deviation of 3.16 and 1.43 for the familiar and unfamiliar topics respectively. This difference was deemed significant by the Wilcoxon Matched-Paired Signed Rank Test, \( z = -2.2014 \), \( p < 0.05 \).
<table>
<thead>
<tr>
<th></th>
<th>FAMILIAR</th>
<th>UNFAMILIAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOPIC1</td>
<td>TOPIC2</td>
</tr>
<tr>
<td>CTS</td>
<td>(sd)</td>
<td>&amp; (sd)</td>
</tr>
<tr>
<td>MJ</td>
<td>11.54</td>
<td>12.09</td>
</tr>
<tr>
<td></td>
<td>(.66)</td>
<td>(1.84)</td>
</tr>
<tr>
<td>LM</td>
<td>11.73</td>
<td>10.23</td>
</tr>
<tr>
<td></td>
<td>(1.34)</td>
<td>(.27)</td>
</tr>
<tr>
<td></td>
<td>(4.83)</td>
<td>(1.55)</td>
</tr>
<tr>
<td></td>
<td>(5.42)</td>
<td>(1.55)</td>
</tr>
<tr>
<td></td>
<td>(2.26)</td>
<td>(.44)</td>
</tr>
<tr>
<td>SJ</td>
<td>10.64</td>
<td>10.36</td>
</tr>
<tr>
<td></td>
<td>(2.85)</td>
<td>(.48)</td>
</tr>
<tr>
<td>Mean</td>
<td>12.79</td>
<td>11.25</td>
</tr>
<tr>
<td>(sd)</td>
<td>(2.89)</td>
<td>(1.02)</td>
</tr>
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</table>

Table 4.12. The length of T-unit across topics
<table>
<thead>
<tr>
<th></th>
<th>FAMILIAR</th>
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<th>UNFAMILIAR</th>
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<tbody>
<tr>
<td></td>
<td>TOPIC1</td>
<td>TOPIC2</td>
<td>TOPIC3</td>
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</tr>
<tr>
<td>MJ</td>
<td>10.15</td>
<td>8.55</td>
<td>5.82</td>
<td>8.17</td>
</tr>
<tr>
<td>LM</td>
<td>7.50</td>
<td>7.67</td>
<td>11.31</td>
<td>8.83</td>
</tr>
<tr>
<td>SK</td>
<td>23.40</td>
<td>9.89</td>
<td>10.25</td>
<td>14.51</td>
</tr>
<tr>
<td>HY</td>
<td>15.33</td>
<td>8.71</td>
<td>9.48</td>
<td>11.17</td>
</tr>
<tr>
<td>JJ</td>
<td>8.00</td>
<td>8.13</td>
<td>10.46</td>
<td>8.86</td>
</tr>
<tr>
<td>SJ</td>
<td>10.00</td>
<td>9.21</td>
<td>12.86</td>
<td>10.69</td>
</tr>
<tr>
<td>Mean</td>
<td>10.37</td>
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<td></td>
<td>7.78</td>
</tr>
<tr>
<td>(sd)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.13. The length of error-free T-unit across topics
B. Fluency

The measures employed to analyze the subjects’ fluency include speech rate and the time length of the presentation. The speech rate was measured in terms of counting the number of words uttered per minute. The length of the time each subject presented was timed from the beginning to the end of the presentation to examine whether subjects spent more time talking on the topics they are familiar with.

As far as the speech rate is concerned, Table 14 shows an overall mean number of words uttered per minutes of 76.11 words for the familiar topics and 61.99 words for the unfamiliar topics. This difference was deemed significant by the Wilcoxon Matched-Pairs Signed-Ranks Test, $Z = -1.9917$, $p < 0.05$. The subjects, overall, are more fluent on topics they are familiar with.

When considering individual subject’s speech rate, five out of six subjects’ mean speech rates on the familiar topics were higher than on the unfamiliar topics. Subject LM whose fluency decreased when she talked on the topics she is familiar with is an exception. However, only three out of these five subjects (subjects SK, JJ, SJ) spoke more fluently on all three familiar topics than on the other three unfamiliar topics. As the Table 14 indicated, the difference in the number of words uttered per minute between the familiar and unfamiliar topics in subjects SK, JJ, and SJ were much more striking than the rest of the three subjects.
In terms of group variation across topics, the Wilcoxon matched-Paired Signed-Ranks Test did not detect the significant difference in the fluency between the familiar and unfamiliar topics, $z = -0.7338$, $p > 0.05$. As far as the individual variation is concerned, some subjects showed higher variability in the fluency of their talk on the familiar topics (i.e., subject HY, JJ, and Sk). Both subject HY and JJ's variation on the unfamiliar topic was the highest among the six subjects. In addition, most of the subjects have higher variability in the fluency of their oral production on familiar topics than unfamiliar topics. The only exception is subject MJ, whose variation on the unfamiliar topics was higher than that on the familiar topics.
<table>
<thead>
<tr>
<th>SUBJE</th>
<th>TOPIC1</th>
<th>TOPIC2</th>
<th>TOPIC3</th>
<th>MEAN</th>
<th>TOPIC1</th>
<th>TOPIC2</th>
<th>TOPIC3</th>
<th>MEAN &amp; sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MJ</td>
<td>64.64</td>
<td>60.30</td>
<td>64.71</td>
<td>63.22</td>
<td>61.90</td>
<td>53.48</td>
<td>58.38</td>
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<tr>
<td>LM</td>
<td>63.88</td>
<td>61.87</td>
<td>56.19</td>
<td>60.65</td>
<td>68.60</td>
<td>62.74</td>
<td>61.68</td>
<td>64.34</td>
</tr>
<tr>
<td>SK</td>
<td>94.70</td>
<td>82.21</td>
<td>95.67</td>
<td>90.86</td>
<td>60.93</td>
<td>54.34</td>
<td>64.89</td>
<td>60.05</td>
</tr>
<tr>
<td>HY</td>
<td>58.75</td>
<td>73.95</td>
<td>52.29</td>
<td>61.66</td>
<td>36.27</td>
<td>44.76</td>
<td>52.78</td>
<td>44.60</td>
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<tr>
<td>JJ</td>
<td>92.78</td>
<td>77.79</td>
<td>85.83</td>
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<td>60.83</td>
<td>54.90</td>
<td>71.40</td>
<td>62.38</td>
</tr>
<tr>
<td>SJ</td>
<td>99.29</td>
<td>92.72</td>
<td>92.47</td>
<td>94.83</td>
<td>86.45</td>
<td>81.69</td>
<td>79.79</td>
<td>82.64</td>
</tr>
<tr>
<td>Mean</td>
<td>76.11</td>
<td>61.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(sd)</td>
<td>(6.09)</td>
<td>(5.56)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.14  The words uttered per minute across topics
Table 15 illustrates that the mean length of time subjects spent on presenting the topics they are familiar with is longer than that on the topics they are not familiar with. The subjects had an overall mean length of time of 7.18 minutes on the familiar topics, compared to 5.59 minutes on the unfamiliar topics. The Wilcoxon Matched-Paired Signed Ranks Test detected a significant difference in the time span of presentation between the familiar topics and unfamiliar topics, $z=-1.9917$, $p<0.05$.

Most of the subjects’ time at talk is longer on the familiar topics than the unfamiliar topics, except for the subject JJ. The mean length of time at talk that subject JJ spent on the familiar topics is slightly shorter than that on the unfamiliar topics (6.44 vs. 6.5). The range of difference in the time at talk between the two types of topics varies. The time that subjects LM and SJ spent on topics they are familiar with is almost twice as long, compared with the time they spent on unfamiliar topics. Some of the subjects (subject LM, SJ, SK) could not talk for more than five minutes on the unfamiliar topics, which was the minimum time of presentation. For the majority of subjects, the shortest time span of the presentation was on one of the unfamiliar topics, except for the subject SK. Overall, SK’s presentation was quite short on every topic. Interestingly, his shortest presentation time was on one of his familiar topics (2.53 minutes) rather than on a topic he was not familiar with.
<table>
<thead>
<tr>
<th></th>
<th>Familiar</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Unfamiliar</th>
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<th></th>
<th></th>
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<tr>
<td></td>
<td>Topic1</td>
<td>Topic2</td>
<td>Topic3</td>
<td>mean</td>
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<td>Topic1</td>
<td>Topic2</td>
<td>Topic3</td>
<td>mean</td>
<td></td>
</tr>
<tr>
<td>MJ</td>
<td>6.25</td>
<td>9.42</td>
<td>7.99</td>
<td>7.89</td>
<td>6.01</td>
<td>5.74</td>
<td>7.28</td>
<td>6.34</td>
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<tr>
<td>LM</td>
<td>11.02</td>
<td>6.95</td>
<td>10.34</td>
<td>9.43</td>
<td>4.84</td>
<td>4.24</td>
<td>4.28</td>
<td>4.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JJ</td>
<td>6.23</td>
<td>8.42</td>
<td>4.66</td>
<td>6.44</td>
<td>6.28</td>
<td>7.45</td>
<td>5.77</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HY</td>
<td>9.43</td>
<td>6.41</td>
<td>8.07</td>
<td>7.97</td>
<td>6.48</td>
<td>7.82</td>
<td>8.62</td>
<td>7.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SK</td>
<td>4.53</td>
<td>2.53</td>
<td>7.39</td>
<td>4.81</td>
<td>2.79</td>
<td>3.63</td>
<td>5.44</td>
<td>3.95</td>
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<td></td>
</tr>
<tr>
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<td>6.59</td>
<td>5.84</td>
<td>6.51</td>
<td>4.87</td>
<td>4.26</td>
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</tr>
<tr>
<td>mean</td>
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<td></td>
<td></td>
<td></td>
<td>7.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.59</td>
</tr>
</tbody>
</table>

Table 4.15. Time at talk
C. Accuracy

To examine whether the topic familiarity has any bearing on the grammatical accuracy of second language learners' oral production, the syntactic errors of subjects' speech on each topic were identified first by the researcher and then checked by a native speaker of English. The error rate was calculated by dividing the total number of errors found in the presentation of each topic by the total number of T-unit.

Table 16 reveals that the mean number of errors produced by the subjects was 1.01 per T-unit on the familiar topics and 1.03 on the unfamiliar topics. The Wilcoxon Matched-Paired Signed Ranks Test did not detect a significant difference in the error rate between the two types of topics, $z=-0.3145, p>0.05$. In addition, the Wilcoxon Matched-Paired Signed Ranks Test shows no significant difference on subjects' variation between the two types of topics, $z=-1.1531, p>0.05$.

Upon examining each subject's performance difference between familiar and unfamiliar topics, it was found that three out of six subjects have a higher mean number of errors per T-unit on the topics that they are not familiar with. In addition, four out of six subjects have slightly higher variation on the familiar topics than the unfamiliar topics.
<table>
<thead>
<tr>
<th></th>
<th>Familiar</th>
<th></th>
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<th></th>
<th>Unfamiliar</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topic1</td>
<td>Topic2</td>
<td>Topic3</td>
<td>mean</td>
<td>(sd)</td>
<td>Topic1</td>
<td>Topic2</td>
<td>Topic3</td>
<td>mean</td>
<td>(sd)</td>
</tr>
<tr>
<td>MJ</td>
<td>0.89</td>
<td>0.81</td>
<td>0.92</td>
<td>0.87</td>
<td>(.06)</td>
<td>1.07</td>
<td>1.00</td>
<td>0.65</td>
<td>0.91</td>
<td>(.23)</td>
</tr>
<tr>
<td>LM</td>
<td>1.57</td>
<td>1.12</td>
<td>1.31</td>
<td>1.33</td>
<td>(.23)</td>
<td>1.37</td>
<td>1.12</td>
<td>1.24</td>
<td>1.24</td>
<td>(.13)</td>
</tr>
<tr>
<td>JJ</td>
<td>2.03</td>
<td>0.98</td>
<td>1.00</td>
<td>1.34</td>
<td>(.60)</td>
<td>1.06</td>
<td>0.66</td>
<td>1.29</td>
<td>1.00</td>
<td>(.32)</td>
</tr>
<tr>
<td>HY</td>
<td>2.03</td>
<td>0.79</td>
<td>0.51</td>
<td>1.11</td>
<td>(.81)</td>
<td>1.24</td>
<td>1.83</td>
<td>1.52</td>
<td>1.53</td>
<td>(.30)</td>
</tr>
<tr>
<td>SK</td>
<td>0.43</td>
<td>0.50</td>
<td>0.71</td>
<td>0.55</td>
<td>(.15)</td>
<td>0.64</td>
<td>0.67</td>
<td>0.35</td>
<td>0.55</td>
<td>(.18)</td>
</tr>
<tr>
<td>SJ</td>
<td>0.45</td>
<td>1.00</td>
<td>1.20</td>
<td>0.88</td>
<td>(.39)</td>
<td>0.68</td>
<td>1.15</td>
<td>1.03</td>
<td>0.95</td>
<td>(.24)</td>
</tr>
<tr>
<td>mean</td>
<td>1.01</td>
<td></td>
<td></td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.16. Error rate per T-unit.
D. Language transfer : The omission of the final stops

To investigate whether the SLA processes such as language transfer occur differentially across domains, one aspect of language transfer—the omission of the final stops was examined. The final stops /p/, /b/, /t/, /d/, /k/, /g/ were first identified and then the total number of the final stops was counted. Second, the pronunciation of each word containing these final stops was checked for each topic. The ambiguous cases were then examined through a spectrogram.

Table 17 illustrates that the mean percentage of final stops deletion was lower (22.95%) on the familiar topics than on the unfamiliar topics (24.61%). However, the difference was not deemed to be significant by the Wilcoxon Matched-Paired Signed Rank Test, $z = -0.6742$, $p > 0.05$. With regard to the group variation between the two types of topics, the results of the Wilcoxon Matched Paired Signed Rank test showed no significant difference in group variation between the two types of topics, $z = -0.734$, $p > 0.05$.

With regard to individual performance, three out of six subjects (subject LM, HY, Sk) have a final stops deletion percentage lower on the familiar topics than on the unfamiliar topics. Two other subjects (MJ, SJ) have a higher final stops deletion percentage on the unfamiliar topics. The speech production of subject JJ did not manifest across topic variation in terms of the final stops deletion.
<table>
<thead>
<tr>
<th></th>
<th>Familiar</th>
<th></th>
<th>Unfamiliar</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topic1</td>
<td>Topic2</td>
<td>Topic3</td>
<td>mean (sd)</td>
</tr>
<tr>
<td>MJ</td>
<td>25%</td>
<td>21%</td>
<td>31%</td>
<td>25.67% (5.03)</td>
</tr>
<tr>
<td>LM</td>
<td>45%</td>
<td>27%</td>
<td>28%</td>
<td>33.33% (10.12)</td>
</tr>
<tr>
<td>JJ</td>
<td>22%</td>
<td>18%</td>
<td>25%</td>
<td>21.67% (3.51)</td>
</tr>
<tr>
<td>HY</td>
<td>36%</td>
<td>34%</td>
<td>39%</td>
<td>36.33% (2.52)</td>
</tr>
<tr>
<td>SK</td>
<td>8%</td>
<td>0%</td>
<td>31%</td>
<td>13.00 (16.09)</td>
</tr>
<tr>
<td>SJ</td>
<td>10%</td>
<td>2%</td>
<td>11%</td>
<td>7.67% (4.93)</td>
</tr>
<tr>
<td>mean</td>
<td>22.95%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.17. The percentage of the deletion of the final stops
INTERVIEW DATA

In order to understand how each subject selected both the familiar and unfamiliar topics, the obstacles they experienced in the course of presenting the topics they selected, as well as the perception each subject had toward their performance, each presentation was followed by a ten minute interview. After all the presentation data were collected and analyzed, one more interview was conducted with each subject in order to have subjects compare and contrast their performance on familiar and unfamiliar topics.

This section presents a descriptive analysis of each subject's report concerning how topics were chosen, how discourse topics or other aspects of language affect subjects' performance across topics and what their perception was concerning their performance across topics. The description of each subject's response to the interview is presented with the analysis of their performance in terms of grammatical complexity, fluency, and accuracy. Because the interview was conducted in Chinese, the passages quoted in this section have been translated. Table 18 lists questions the researcher asked during interviews with the subjects. Other questions were used as probes to follow-up questions which occurred during the interview.
A. Process of selecting a topic and organizing the content of presentation:

1. Why did you choose this topic as a familiar/unfamiliar topic?
2. What criteria did you use to select this topic: degree of knowledge familiarity, degree of linguistic familiarity or the interest level?
3. After selecting the topic, how did you choose what the contents to include in the presentation?
4. How did you organize the information you presented?

B. In the course of presentation:

5. During the presentation, did you feel the familiarity/unfamiliarity of the topics facilitated/hindered your oral performance?
6. If so, in what ways? —at the level of lexicon, syntax, content organization.

C. Self-evaluation

7. Are you satisfied with your performance today?
8. If not, which aspects do you think could have performed better?
9. Which aspects of language do you think hindered your performance this time?
10. Compared with your performance on the previous topics, which topics do you think you performed the best?

Table 4.18. Questions asked during each participant interview
Case study I --Subject HY

HY is a male graduate student majoring in natural resources. He selected "marketing management," "audio components," and "South Africa" as three of his familiar topics. "Marketing management" was chosen as one of the familiar topics because marketing management has been an interest of his for more than ten years. He has a bachelor's degree in agricultural marketing. Two master degrees he subsequently earned (one in the area of agricultural marketing, the other in the management of commerce) are also related to marketing. He is currently working on a Ph.D. degree in the field of park, recreation and tourism administration and continues to pursue marketing studies. Given this background, he was confident that he had the extensive knowledge on this subject, and "was not concerned about a lack of vocabulary to express himself in this subject area." In addition, he stated that there were so many aspects of marketing that he could discuss that he did not have to worry about a lack of content for the presentation. However, because it had been a year since he had a marketing course, he rated this topic as less familiar than the topic of "audio components."

Audio components was selected as a second familiar topic to present because highend audio has been his lifetime hobby. He is very interested in high end audio components and keeps himself informed by subscribing to English language audio-related magazines. Furthermore, he frequently discusses
certain types of audio components with other audiophiles in Chinese. This topic, according to him, is his most familiar topic among the three familiar topics in terms of the content knowledge level, linguistic knowledge level, interest level and the currency. However, he hesitated to choose this topic as one of his familiar topics at the beginning because he seldom discusses this topic with others in English.

"South Africa" was chosen as his third familiar topic because of the year he spent in the South Africa, which left a deep and lasting impression on him. The government of South Africa granted him a one-year scholarship so that he could study in South Africa for one year and earn a Master's degree. In addition, he was the chairperson of the Chinese Student Association when he was in the South Africa. Even though this trip took place six years ago, he still felt very familiar with this topic. This topic was rated as the least familiar among the familiar topics due to the noncurrentness.

In selecting the unfamiliar topics, HY chose general and broad topics such as "art", "music", and "computers." He stated that it is very difficult to present on something that you are not familiar with for ten minutes. He therefore chose "art," "music," and "computer" as topics so that he could at least have something to say, albeit without much depth. In addition, he tried to avoid those topics and content which he did not have sufficient vocabulary to elaborate on. For instance, he noted that while he thought about discussing some famous
composers when presenting on the topic of music, he had to reconsider because he realized that he did not know how to say those composers' names in English. Instead, he talked about how his taste in music changed from childhood to adulthood. Thus, for subject HY, the content knowledge and the lexical knowledge were two major concerns in choosing topics and in selecting the presentation content for the topic chosen.

In the course of presentation, HY felt that the vocabulary and the grammar were two major constraints in his performance on familiar topics. For instance, in the familiar topic “South Africa,” he reported that because of the need for using the past tense to describe his experience in South Africa, he had to speak very slowly to make sure he was using the past tense. Although he carefully monitored his tense usage, as shown in Table 19 line 15, the choice he made may have been incorrect.

In addition to the grammatical barriers, he also stated that the lack of vocabulary was a significant factor that hindered his performance on the familiar topics. Examining his data, it was found that among the three familiar topics, he did not seem to have lexical difficulty in the topic of “audio components,” which he claimed to be his most familiar topic. However, on the topic of “South Africa,” which he rated as the least familiar topic among the three, he did struggle with the vocabulary at times. As shown in Table 19, transcripts line 14 (note that the errors have been left uncorrected), he had difficulty finding the word “terminated,”
He used the pause filler “umm” while trying to think of the word. He, then, noted that he could not think of the precise term to express himself by pausing for a while and saying “I don’t know the term” and finally resorting to the word “stopped” instead.

Similarly, in the course of contemplating the word “reputation” as shown in lines 17-19, he first mistakenly chose the word “population,” which has the same number of syllables and a similar consonant structure as the word “reputation.” He later realized that this was not the right word and tried the word “image,” and indicated that this try was closer to what he intended to say by saying that “yeah, something like that”. Eventually, he came up with the word “reputation”.

This particular exchange indicates that when he was presenting on a topic which he was familiar with and interested in, he took extra time to search for the word he needed instead of abandoning the information he thought was important and wanted to mention.
13 um, 1991 is a very special year for South Africa. ummm, the
14 Apartheid was um officially umm I don't know the term +++ stopped.
15 in 1991. So I am, I was, I am so lucky to to be there in that critical
16 year. umm, There was a very serious race problem political problem
17 in South Africa. I believe they got a bad international population.
18 international image or +++, ya, something like that, reputation, ya,
19 international re, reputation.

Table 4.19. Example of lexicon search in a familiar topic “South Africa”

In contrast to the familiar topics, searching for a content word did not occur in the presentation of unfamiliar topics. For unfamiliar topics, HY reported that he did not remember having any difficulty in vocabulary or grammar. Rather, the main obstacle for him in presenting the unfamiliar topics was the content. During the presentation, he reported that he had to spend additional time in thinking about the content to present, which may account for why the number of words he uttered per minute on the unfamiliar topics “art” and “music” was far less than the familiar topics.
In self-evaluating his performance across all of the topics, he reported that for the familiar topics, he felt that his performance was best on the topic of audio components, followed by the topics of marketing management, and South Africa. He also stated that he was disappointed with his performance on two of the familiar topics: "marketing management" and "South Africa." While he thought he was familiar with these two topics, he felt that he did not present very well on them. Thus, in HY's case, a discrepancy exists between the perception of degree of topic familiarity and actual performance. As far as the unfamiliar topics are concerned, he did not feel any difference in his performance among the three unfamiliar topics. Overall, he felt his performance on the familiar topics
was better than that on the unfamiliar topics in terms of the depth and the organization of the content presented.

Comparing his perception of his performance with the quantitative data, it was found, as shown in Table 20, that the mean length of T-units was longest on the topic of “audio components” which he claimed was the most familiar topic. His speech was most fluent on the topic of “marketing management” rather than audio components. Interestingly, he had the highest error rate on the topic with which he was most familiar—audio components.

Case study II -- Subject SJ

SJ is a male graduate student majoring in environmental education. He chose “himself and syllabus,” “mountain,” and “dissertation” as the three familiar topics and “linguistics,” “beauty shops,” and “Turkey” as his unfamiliar topics. For the first topic “himself and syllabus,” SJ had recorded his first day lecture in a statistics course during which he spent the first 10 minutes introducing himself and going through the syllabus with students. This topic was chosen as his most familiar topic because he has been a teaching assistant in a statistics course for two and half years and has taught this course consistently for more than five quarters. He was very confident that he would not have any difficulty in content or language on this topic.
The second familiar topic he selected was "dissertation." He has been working on his dissertation for one year and recently finished his dissertation writing and was preparing the oral defense for his dissertation at the time of data collection. This topic was chosen because he felt that he has comprehensive content knowledge about his dissertation research. In addition, he felt very familiar with the vocabulary needed for presenting the dissertation research. In this presentation, he briefly discussed the theme and the significance of his dissertation.

The third familiar topic he selected was "mountains." As he reported, he is a nature lover and is especially fond of mountains. Mountain climbing has been his hobby for ten years. He joined a mountain club and began exploring the mountains in Taiwan when he was a high school student. He had also been a member of a mountain aboriginal service team since he was a freshman in the university. In addition, he worked as a ranger in a national park for one and half years before coming to the United States to study. In the presentation, he narrated his journey of becoming a mountain-lover. While he is eager to express his feelings about mountains to others, he seldom has had the chance to talk about them in English. Hence, he rated this topic as his least familiar topic among the three because of the lack of practice compared with the other two topics.
With regard to the unfamiliar topics, he stated that it did not take him long to select the unfamiliar topics. He reported that "because I have so many things that I do not know, I chose whatever popped up my mind and talked about it." For instance, he decided to speak on the topic of linguistics because his linguistics-major neighbor reminded him that linguistics is one of the subject areas that he is not familiar with.

As far as the difference in selecting the presentation contents between familiar topics and unfamiliar topics was concerned, subject SJ reported that for the familiar topics he selected those areas which his language ability could handle well and abandoned those that he felt he would have difficulty in expressing. For the unfamiliar topics, because of a dearth of content knowledge toward those unfamiliar topics, he did not have much choice and could only discuss what he knew and what his language ability could express.

With regard to the organization of presentation content, subject SJ states that for the familiar topics, he carefully thought about the order of content to be presented, while for unfamiliar topics, the information presented was not organized as coherently as for familiar topics. Because of the limited content to be presented on the unfamiliar topics, he wrote down certain key words (e.g., neighbor, English 105 for the topic of linguistics) and just spoke about whatever he thought at the moment.
During the presentation, for the familiar topics, he did not recall that he encountered any syntactic, or lexical barriers in presenting the content because he confined himself in those subjects his language ability could handle when he selected the presentation content. He noted that he did not pay much attention to monitoring the grammatical and vocabulary usage when he presented on the familiar topics. He only concentrated on presenting what he wanted to express. For the unfamiliar topics, he felt that both linguistic knowledge and content knowledge hindered his performance. However, he considered the linguistics knowledge had a greater impact than the content knowledge on his performance. He believed that if he were permitted to use his native language to present the unfamiliar topics, he could say more and present better even though he was unfamiliar with the content.

In self-evaluating his performance, like subject HY, he felt his performance on the familiar topics was more fluent than on the unfamiliar topics. In addition, the performance of the familiar topics was superior to that of the unfamiliar topics in terms of the depth of content presented. Among the familiar topics, he thought that his performance on the topic of “statistics” and “dissertation” was better than that of “mountain”. He, however, reported that he most enjoyed presenting on the topic of “mountain.” He stated that he enjoyed this topic so much that he did not care about grammatical accuracy. He later realized that he mostly used present tense to describe past events on the topic of “mountain.”
Among the unfamiliar topics, he thought he did the worst job on the topic of "Turkey."

His perception of the performance on various topics partially matched with the analysis of quantitative data shown in the following table. As Table 21 shows, he spoke most fluently on the topic of the statistics course, which he rated as his most familiar topic. The mean length of the T-units was, however, longest on the topic of dissertation, with which he was second most familiar. Interestingly, the highest error rate he had was on one of the familiar topics which he claimed he enjoyed most in presenting.

<table>
<thead>
<tr>
<th>SJ</th>
<th>Familiar</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topics</td>
<td>Syllabus</td>
<td>Dissertation</td>
</tr>
<tr>
<td>Complexity</td>
<td>10.64</td>
<td>15.43*</td>
</tr>
<tr>
<td>Fluency</td>
<td>99.29*</td>
<td>92.47</td>
</tr>
<tr>
<td>Error rate</td>
<td>0.45</td>
<td>1.00</td>
</tr>
<tr>
<td>Time at talk</td>
<td>7.07*</td>
<td>6.59</td>
</tr>
</tbody>
</table>

Table 4.21. The effect of topic familiarity on SJ’s oral production
Case study III—Subject SK

SK is a male graduate student majoring in civil engineering. He has been in the master's degree program for about two and a half years. He chose to present on three models in his academic major field as the three familiar topics: transportation planning model, travel time, and influence model. He decided to speak on these three topics because these are the areas that he frequently has the chance to speak on and think about in English. According to him, the transportation planning model and travel time are two of the concepts he often encounters in the master program. The influence model is a model that he had learned just prior to participating in this study. Among these three familiar topics, he rated the topic of the transportation planning model as his most familiar topic and the influence model as the least familiar topic.

The three unfamiliar topics he chose to speak on were "computers," "sports," and "food." The reason why he chose to speak on these topics was due to their broadness of scope. Because of his academic major, he uses computers frequently. Although he has general knowledge about computers, he was not very familiar with computer parts. According to him, the topic of computers, compared with the other unfamiliar topics, was the most familiar topic among the unfamiliar topics. With regard to the topics of sports and food, he reported that the reason why he selected these two topics was that he seldom talked on these two topics in English. He stated that he knew some restaurants because he
sometimes dined out with his Chinese friends. Regarding sports, he seldom watched sporting events.

As far as selecting the presentation content was concerned, he only chose the main concept of each model to present because of the time constraint. He estimated the approximate time needed for the content prepared for the familiar topics. As shown in Table 22, he apparently overestimated the time he spent for content preparation. Except for the topic of transportation planning model which he claimed was the most familiar topic among three, he did not meet the minimum presentation time of five minutes. A similar situation happened in his presentation on the unfamiliar topics. It is interesting that he had the shortest presentation time on one of the familiar topics. He stated that the reason why his presentation time was shortest on the topic of “travel time,” with which he was familiar was that the scope of the topic was narrow and limited. In addition, without a blackboard and chalk, he found it difficult to explain certain concepts that involved complicated formulas. That is why he only presented the key concept of travel time and discarded other concepts that he found too much trouble to present in that context.

With regard to the organization of the presentation content, he reported that for the unfamiliar topics, he organized the content in the following way: first providing the definition of a certain term, explaining the key concept of the model,
and finally giving examples. For the unfamiliar topics, he was, however, unable to apply the same organizing approach because of unfamiliarity with the content.

During the course of the presentation, he particularly felt that sentence structure was the main constraint of his performance. He had the concept in mind but had difficulty in expressing his thought with the proper sentence structure. In addition to the difficulty in the sentence structure, he also experienced difficulty in the vocabulary level. Although he did not have any problem in the specific terminology related to his academic major field, he did sense a lack of vocabulary in expressing certain concepts. He reported that he particularly felt this limitation in vocabulary and sentence structure when he presented on the familiar topics. He had planned to elaborate more on the model he presented. He had to skip certain subjects because of his difficulty with linguistic aspect of the presentation.

In the self-evaluation of his presentation, he felt that his performance was the best on the topic of the transportation planning model, with which he was most familiar. Among the unfamiliar topics, he felt he performed much better on the topic of computers.

His perception regarding his best performance on the familiar topic partially accords with the quantitative data shown in Table 22. As Table 22 indicates, he spoke with the highest speed in introducing the transportation planning model, which he reported as the most familiar topic. In addition, his presentation time
was longest on the same topic. He, however, had the highest error rate on the topic he claimed as the most familiar. This outcome was surprising, as was the case with other subjects.

<table>
<thead>
<tr>
<th>SK</th>
<th>Familiar</th>
<th></th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Influence</td>
<td>Travel time</td>
<td>Planning model</td>
</tr>
<tr>
<td></td>
<td>Fluency</td>
<td>94.70</td>
<td>82.21</td>
</tr>
<tr>
<td></td>
<td>Error rate</td>
<td>0.43</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Time at talk (min)</td>
<td>4.53</td>
<td>2.53</td>
</tr>
</tbody>
</table>

Table 4.22. The effect of topic familiarity on SK's oral production

**Case study IV -- Subject LM**

LM is a housewife of a graduate student. She has been in the United States for almost five years. Three of the familiar topics she chose include: pregnancy, her baby, and one old friend. Pregnancy was selected as one of her familiar topics partially because she recently experienced herself and partially because nursing was her major. Thus, she has solid knowledge on this subject.
After she earned a bachelor degree in nursing, she also taught this subject for two years. In addition, she had extensive clinical experience. Moreover, during her pregnancy, she studied this issue intensively. In the presentation, she introduced the issues that a pregnant woman needs to pay attention to.

The second familiar topic she chose to present on was "her baby." Because she has an eight-month old baby and, she was very interested in talking about it. In the presentation of this topic, she described in detail what her baby can do, what kind of things her baby is interested in and how much this baby meant to her.

The third familiar topic she selected to talk about was one of her old friend named Klouze. Klouze is an old family friend living in Swaziland. He is now eighty years old. Last year, Klouze invited her husband and her to Swaziland. They stayed there for almost one month, which was a very special memory for her. In the presentation, she introduced how they first met him, how they became friends, and what she learned about Klouze during these one-month visits. According to her, the degree of familiarity she had for these three familiar topics was the same. She, however, felt that the topics of “Klouze” and “her baby.” was easier for her to talk about.

The unfamiliar topics she selected include: Chinese tea, swimming, and Africa. In selecting the unfamiliar topics, similar to subject SJ, she felt that it was very difficult to choose three unfamiliar topics to present for five to ten minutes,
even though she had so many topics that she was not familiar with. Her difficulty was reflected on the total presentation time on the unfamiliar topics. The presentation time for each of the unfamiliar topics did not exceed five minutes.

She reported that she chose the unfamiliar topics at random. For instance, she stated that she decided to talk on the topic of tea when she opened the cabinet and saw a container of Chinese tea. She thought she could talk about tea because she could say something about it, though she was not familiar with it. For the same reason, swimming and Africa were selected as two other unfamiliar topics. She noted that she did not know much about swimming or Africa. Swimming has been a skill she wanted to learn but never succeeded. She thought she could say something about her experience. Africa is a geographical area she seldom paid attention to and had little knowledge about.

As far as the selection and organization of the presentation content were concerned, she reported that she chose those which she could speak at length in Chinese. In addition, she noted that for the topic of “baby” and “one old friend,” she did not take time to organize the content. As soon as she decided on the content, she started to talk. For the topic of “pregnancy,” she, however, jotted down the key words of the presentation contents.

During the presentation, she felt that her limited language ability was the main obstacle of her performance in the familiar and unfamiliar topics. She felt that she had a linguistic barrier for both types of topics. She, however, thought
that the presentation of familiar topics was easier than that of unfamiliar topics because of the familiarity of content. For the unfamiliar topics, the difficulty she had was multiplied by not knowing what content to present.

In evaluating her performance between the familiar topics and unfamiliar topics, she felt that she performed better on the familiar topics than on the unfamiliar topics. Among the familiar topics, she thought that she did better on the topic of “one old friend” and “baby” because she had a lot things she could describe. Although she was familiar the topic of “pregnancy”, she felt that the language she needed in presenting this topic was harder than the other two familiar topics so that she did not feel that she handled this topic as well as the other two. With regard to the unfamiliar topics, she did not feel any difference in her performance among the three unfamiliar topics. She felt that her performance on the three unfamiliar topics was equally bad because she was not familiar with the content of all three unfamiliar topics.

In comparing her perception of her performance across topics with the quantitative data shown in Table 23, there is a discrepancy between her perception of her performance and the actual quantitative data. She perceived that her performance on the topics of Klouze and her baby was better among the familiar topics. Her mean length of T-units, however, was longest on the topic of pregnancy, the performance of which she perceived not as good as the other two familiar topics. Surprisingly, her speech was most fluent on one of the unfamiliar
topics—tea. In addition, her speech had the highest error rate on the topic of Klouze, which she felt was easier for her to talk about and she perceived her performance was better among the familiar topics.

<table>
<thead>
<tr>
<th>LM</th>
<th>Familiar</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic</td>
<td>Klouze</td>
<td>Baby</td>
</tr>
<tr>
<td>Complexity</td>
<td>11.73</td>
<td>10.23</td>
</tr>
<tr>
<td>Fluency</td>
<td>63.88</td>
<td>61.87</td>
</tr>
<tr>
<td>Error rate</td>
<td>1.57*</td>
<td>1.12</td>
</tr>
<tr>
<td>Time at talk</td>
<td>11.02</td>
<td>6.95</td>
</tr>
</tbody>
</table>

Table 4.23. The effect of topic familiarity on LM's oral production

Case study V--Subject JJ

Subject JJ is a female graduate student majoring in foreign language education. The three familiar topics she chose were music, New Year’s Days and a recently read book. She chose to speak on “America,” “child” and “sports”
as her unfamiliar topics. Subject JJ has been a classical music fan since her childhood, which is the main reason why she selected the topic of music as one of her familiar topics. She played piano herself and frequently attended concerts. She was confident that she had extensive knowledge on the history of music, composers and performances and was able to speak on this topic well. New Year’s Day was chosen as another familiar topic because she has experienced it through her lifetime. In addition, she had had several opportunities to introduce her culture to her friends in the United States. She chose to present on a book she had recently read partially because she believed that she had a vivid memory of the book and partially because she had strong feelings toward the book.

The unfamiliar topics she selected included “sports,” “America,” and “child.” She stated that the conversation she had had with the native speaker on the topic of sports caused her to select this topic which she felt very uninterested in and not knowledgeable about. She, however, found it difficult to come up with two other unfamiliar topics. She noted that she came up with many unfamiliar topics upon first reflection based on the content. She, however, came to realize that she did not have enough linguistic knowledge to describe most of the unfamiliar topics when she went through each potential topic in her mind. She had to choose the other of two unfamiliar topics according to her language ability. Hence, the topic of “America” and “child” were not the most unfamiliar topics on
her list of potential unfamiliar topics. She chose those two, like the subject MJ, because of the easiness of the content and language needed.

As far as the selection of the presentation content was concerned, she reported that the process of selecting the presentation contents for each topic was similar to that of selecting the topics. Like subject LM, JJ first considered the content in Chinese and then used her linguistic knowledge as a major criteria to exclude those contents which she could not express in English.

With regard to the organization of the presentation content, she reported that she only considered the order of information to be presented for the familiar topics. She stated that she wrote the key words to remind herself what went next for the familiar topics. For the unfamiliar topics, she reported that because there was not much content that she knew about, she just talked about what she did know about the topic and did not spend time in organizing the content before the presentation.

Her response to the interview question of whether she felt the topic familiarity/unfamiliarity facilitated/hindered her performance during the presentation was that the degree of familiarity affected the flow of her presentation. She felt that her presentation on the familiar topics was smoother than that on the unfamiliar topics in terms of content because of her familiarity with the content. For the unfamiliar topics, she recalled that she often had to spent time in thinking what to say next.
Regarding whether she experienced any difficulty in syntax or vocabulary in presenting both types of topics, she did not recall that she had any grammatical difficulty in presenting both types of topics because she focused on the content which needed to be presented. She, however, reported that she had trouble finding the words she needed for the unfamiliar topics. As shown in Table 24, she had difficulty in finding the right vocabulary on the topic of "sports" and "America". It is interesting that she employed the Chinese term she needed aloud while she was searching for the precise vocabulary.

Table 4.24. JJ's search for English vocabulary
In evaluating her performance on the two types of topics, she felt that overall the presentation of the familiar topics went better than that of unfamiliar topics in terms of the flow of the presentation. She did not feel that there was any difference between two types of topics in terms of grammar. She reported that she did not think of grammar while she presented. She felt that among the familiar topics, her performance was the best on the topic of music. She reported that it was hard for her to rate her own performance among the unfamiliar topics.

Like subject LM, subject JJ’s perception was different from her results of analysis shown in Table 25. As Table 25 shows, she had the longest mean length of T-units on the topic of New Year’s Day. Her mean length of T-units was shortest on the topic of America. In terms of fluency, her speech was most fluent on the topic of New Year’s Day and least fluent on the topics of child. Interestingly, she also had the highest error rate on the topic, which she spoke with the highest speed and longest mean length of T-units (i.e., New Year’s Day). She had the lowest error rate on one of the unfamiliar topic—child.
Table 4.25  The effect of topic familiarity on JJ’s oral production

<table>
<thead>
<tr>
<th>JJ</th>
<th>Familiar</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topics</td>
<td>New year’s day</td>
<td>Music</td>
</tr>
<tr>
<td>Complexity</td>
<td>16.51*</td>
<td>12.13</td>
</tr>
<tr>
<td>Fluency</td>
<td>92.78*</td>
<td>77.79</td>
</tr>
<tr>
<td>Error rate</td>
<td>2.03*</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Case study VI--Subject MJ

MJ is a female graduate student majoring in communication. She has been in the United States for four years and is currently working on her dissertation. The familiar topics she chose were “herself,” “mother” and “proposal.” The simplicity of the content and linguistic knowledge needed for the presentation was the criteria that subject MJ used in selecting the familiar topics. She decided to introduce herself and her mother in two of the presentations because she expected that she and her mother were the two persons with whom she was most familiar. In addition, she expected that the linguistic knowledge
needed for these two topics would be easier. The other familiar topic she
selected was "proposal." She recently finished a candidacy examination and
dissertation proposal. She was very interested in talking about her proposal
because she has devoted so much time to it.

The three unfamiliar topics she chose were: "brother-in-law," "cooking," and
"driving." As she reported, cooking and driving are two activities she was least
familiar with and interested in. She chose the topic of "brother-in-law" as a
familiar topic because he is one of the family members that she seldom had
conversation with, and she wanted to change that situation. Although she chose
this topic as an unfamiliar one, she later realized that this topic should have been
presented as a familiar topic. Although it is true that she was not familiar with
her brother-in-law, she was, however, very familiar with her unfamiliarity of her
brother-in-law as well as the effort she made to understand him. Her familiarity
with this topic was also reflected in the quantitative data shown in Table 26. The
mean length of T-units was longest on the topic of "brother-in-law." In addition,
the measure of fluency on this topic further exceeded the other two unfamiliar
topics.

Unlike the other subjects, she did not think about the content she needed to
include in the presentation nor did she think about the organization of
presentation content. She said whatever came into her mind at the moment of
the presentation. Among the familiar topics, she reported that she did have
difficulty in deciding what to include in the topic of “myself” and “my mother,” when she started to talk, which she did not expect to happen. She felt that these two topics were so broad that she did not know which aspect she should choose to focus on.

During the presentation, she felt that vocabulary was the major obstacle of her performance in the familiar and unfamiliar topics. She often experienced a lack of vocabulary to express her thought in the presentation of the topic of “myself”, “mother” and all three unfamiliar topics. She further explained that she strongly sensed that she lacked words to express her emotion and personal feelings when she presented on these five topics. She, however, did not encounter this kind of difficulty when she talked about her dissertation proposal. She speculated that this may be because she has spent so much time thinking through the research proposal and she had so many chances to talk about her dissertation proposal with her advisor and her colleagues.

In evaluating her performance, she felt that the topic of her dissertation proposal was the one she performed best among the familiar topics. Regarding the unfamiliar topics, she felt that her performance was worst on the topics of “cooking” and “driving.” She stated that it was very hard for her to present on the unfamiliar topics in English because she had to handle both language problems and content problems simultaneously.

Similar to the case of subject LM, there is discrepancy between her
perception of her performance across topics and the actual quantitative data shown in Table 26. She perceived her performance was best on the topic of the dissertation proposal. Her longest mean length of T-units, as mentioned above, was, however, on the topic of "brother-in-law." The mean length of T-units was shortest on the topic of cooking. Her speech was most fluent on the topic of "myself" and least fluent on the topic of "cooking." The error rate was highest on the topic of "brother-in-law" and lowest on the topic of "driving."

<table>
<thead>
<tr>
<th>MJ</th>
<th>Familiar</th>
<th>Unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic</td>
<td>Proposal</td>
<td>Mother</td>
</tr>
<tr>
<td>Complexity</td>
<td>11.54</td>
<td>12.09</td>
</tr>
<tr>
<td>Fluency</td>
<td>64.64</td>
<td>60.30</td>
</tr>
<tr>
<td>Error rate</td>
<td>0.89</td>
<td>0.81</td>
</tr>
<tr>
<td>Time at talk</td>
<td>6.25</td>
<td>9.42</td>
</tr>
</tbody>
</table>

Table 4.26. The effect of topic familiarity on MJ's oral production
Synthesis

As reflected in the subjects’ responses to the question of how the topics and the presentation contents were selected, topic selections and content decisions were based not only on the degree of familiarity with certain topics but also on language ability. Most subjects reported that they tried to avoid those topics and content in which their linguistic competence was limited.

In the course of their presentations, most subjects reported that their language ability was the major constraint for their performance for both familiar topics and unfamiliar topics. Limited vocabulary was especially perceived as a major obstacle in presentations by most subjects. Presentation of familiar topics was considered to be easier to handle than unfamiliar topics in terms of content selection and organization.

With regard to the relationship between subjects’ perception of their performance and the results of the quantitative analysis, the subjects’ perception did not always correspond to the results of the quantitative analysis. The perception that three male subjects had regarding which familiar topic they performed the best corresponded to the results of quantitative analysis either in terms of syntactic complexity or fluency. The three female subjects’ perception concerning the topic on which they performed the best did not concur with the
results of quantitative analysis. For the female subjects, the mean length of T-units was the longest on a topic other than the one which they considered themselves to have performed the best. The same was true for the fluency of their speech.

As far as the syntactic accuracy was concerned, the highest error rate and the lowest error appeared all on one of the familiar topics. The data showed that all the subjects had the highest error rate on one of the familiar topics. In addition, four out six subjects had the lowest error rate on other familiar topic. In other words, the subjects made either the most or the least number of errors on topics they were familiar with. Moreover, the error rate seems to be related to the grammatical complexity of the oral production. Three out of six subjects had the highest error rate on the topic which they had the longest mean length of T-units (i.e., subject MJ, JJ, HY).
CHAPTER 5

CONCLUSION

Introduction

Research in the field second language acquisition has suggested that differences in content knowledge can affect learners' reading and listening comprehension (Gass & Varonis, 1984; Lee, 1986; Lipson, 1982; Steffensen, Joag-Dev & Anderson, 1979; Stevens, 1980). Research on writing also reveals that both L1 and L2 writers perform better both qualitatively and quantitatively when writing about topics they know well (Chesky et al., 1987; Tedick, 1988, 1990; Winfield & Barnes-Felfeli, 1982). Relatively little research has been conducted, however, on the effect of topic knowledge on L2 learners' oral performance. As Tarone (1988) states "the topic of communication... is one of the most under-researched areas in the study of interlanguage variation" and "the precise effects of topic upon variation have yet to be established" (p. 119). Among the limited amount of literature concerning the effect of content knowledge on L2 oral
performance (Smith, 1989; Woken & Swales, 1989; Zuengler, 1989), the research designs and contexts varied, and findings are inconclusive.

In response to the scarcity of research on topic-related interlanguage variation, the purpose of the present study was to explore the relationship between discourse topics and second language learner's oral performance. This research had three specific purposes: (1) to describe the relationships between discourse topics and a second language learner's participation in NS-NNS conversation; (2) to describe the relationships between discourse topics and the grammatical complexity, the accuracy and the fluency of second language learner's oral production and (3) to examine whether SLA processes such as language transfer take place differentially within discourse domains, as held in the discourse domain hypothesis advanced by Selinker and Douglas (1985).

The first section of this chapter summarizes the results of the analyses reported in Chapter 4. This section is then followed by the implications and recommendations for further research.

Results and discussion

This study addresses the following questions:

In the natural NS-NNS conversations and NNS presentation:

(1) How is the topic familiarity related to the second language learner's turn-taking patterns and participation in NS-NNS interaction?
(2) What is the relationship between topic familiarity and the grammatical complexity of second language learner's oral production in terms of
   (a) mean length of T-units?
   (b) mean length of error-free T-units?

(3) What is the relationship between topic familiarity and the fluency of second language learner's oral production in terms of
   (a) the overall length of speech?
   (b) the rate of speech?

(4) What is the relationship between topic familiarity and the syntactical accuracy of second language learner's oral production?

(5) Do SLA processes such as language transfer take place differentially within discourse domains, as held in the discourse domain hypothesis advanced by Selinker and Douglas (1985)?

With regard to the first research question concerning the relationship between the topic familiarity and the second language learner's turn-taking patterns, it was found that the subject not only actively took turns to participate in the conversation on the topics that she was familiar with (i.e., pronunciation, religion, and New Year's Day) but also talked at length on these topics in terms of total number of words. In contrast, she was relatively quiet on the topic of "sports," about which she was not knowledgeable. The total number of words
she uttered on the topic of "sports" was the least among the six topics as was the number of turns she took on that topic.

As far as the mean turn length was concerned, the subject's turns were longer on the topics of "religion" and "pronunciation" (i.e., 31.57, and 24.41 words per turn respectively) than on the other topics. With regard to her performance on the topic of "sports," even though she was relatively quiet in terms of her turn-taking pattern and the total number of words uttered, the length of her turn on the topic of "sports" was not the shortest among the six topics. Interestingly, the length of her turn was shortest on the topic of "New Year's Day," in which she participated very actively in terms of analysis of the turn-taking patterns. This indicates that subject may either take a lot of turns but only hold the floor for a short amount of time or else take less turns and hold the floor longer.

In terms of the quality of the turns, the Chinese subject obtained the highest participation value on the topic of "pronunciation" (44.95 PV) followed by the topic of "New Year's Day" (44.94), "religion" (37.8), "Singapore" (26.03), "ESL program" (25) and "sports" (9). In addition, the analysis of categorical participation revealed that in the area of topic initiation, the Chinese subject did more topic work (initiating new sub-topics, bringing new information) on the topic of "pronunciation," "religion" and "New Year's Day" than the rest of the topics. As far as self-selection is concerned, she participated more actively on the topic of "pronunciation" and "religion." With regard to the area of allocation, the subject
did more allocation of speakers on the topic of “pronunciation” (52.94%) and less on the topic of “sports” (10%) and “ESL program” (7.69%). Her difference in the area of allocation across topics revealed a topic-related variation on the Chinese subject’s participation. When she was familiar with a topic, she was more engaged in the topic, which was illustrated by the fact that she did much more allocating of next speakers on the topic of “pronunciation” than the rest of the topics. Concerning the sequencing of discourse, the results showed that the Chinese subject did more sequencing work, again, on the topic of “pronunciation.”

On the whole, on the topic of “pronunciation,” which she was familiar with and interested in, her categorical performance was high on every category, which indicates that she actively interacted with other interlocutors by specifying speakers of next turns, volunteered to respond to the interlocutor frequently, and contributed to the topic development. Similarly, her categorical performance was low on every category on the topic of “sports” which she did not know much about and did not have much to say.

The analysis of turn-taking patterns revealed that the subject’s participation was more active both quantitatively and qualitatively on the topics that she was familiar with than the topics she was not familiar with. The total number of turns taken was more and the mean turn length was longer on the topics she was familiar with. In addition, the participation value was higher on the familiar topics and so was the categorical performance.
Regarding the second research question concerning what the relationship is between topic familiarity and the grammatical complexity of second language learner's oral production, the results show that while cross-topic variation in grammatical complexity was observed in the conversation data, it was not obvious in the presentation data. In the conversation data, the subject's average length of T-units on the topic of "sports," about which she was not knowledgeable, was shortest (8.6 words) among six conversation topics, and longest on the topic of "pronunciation" (13.52 words) which was one of her familiar topics.

In the presentation data, the difference in the overall mean length of T-units produced by the subjects between familiar topics and unfamiliar topics was not statistically significant (i.e., 12.79 words for familiar topics, 11.25 words for unfamiliar topics). While the cross-topic variation was not observed in presentation in terms of overall mean length of T-units, the cross-topic variation was apparent for each subject. The results showed that each subject had the longest mean length of T-units on one of the familiar topics.

As far as the third research question (what is the relationship between topic familiarity and the fluency of a second language learner's oral production) was concerned, it was found that topic familiarity was significantly related to the fluency of second language learner's oral production. In the presentation data, the difference in a subject's overall mean number of words uttered per minute
between the familiar topics and unfamiliar topics was deemed significant by the Wilcoxon Matched-Paired Signed-Ranks Test. For the conversation data, the Chinese subject produced the highest speech rate on one of the familiar topics (i.e., "New Year's Day": 148.82 words) and the lowest speech rate on the topic of "sports" (115.46 words), about which she was not knowledgeable.

In addition, when the fluency was measured in terms of the length of time at talk, it was found that the mean length of time the subjects spent on topics they were familiar with is significantly longer than that on the topics they were not familiar with for the presentation data. In the conversation data, it was also found that the subject spent more time on the topics she was familiar with. She took up 35.51% of the time in the conversation on the topic of New Year's Day, 30.33% on the topic of pronunciation and 29.12% on the topic of religion. Again, she had the shortest speech time on the topic of sports (16.58% of the total time).

Concerning the relationship between the topic familiarity and the syntactical accuracy of a second language learner's oral production, it was found that in the conversation data, the subject produced the least accurate speech on the topic of "sports" (i.e., 0.76 errors per T-unit), which she was not familiar with or interested in. Her grammatical error rate was the second highest (i.e., 0.51 errors per error) on one of the familiar topics (pronunciation) in which her participation level was highest among topics. In the presentation data, the difference in the number of
error per T-units between the familiar topics and unfamiliar topics was not statistically significant.

With regard to the last research question concerning whether language transfer takes place differentially within discourse domains, as held in the discourse domain hypothesis advanced by Selinker and Douglas (1985), the results show that in the conversation data the subject has the highest percentage of final stop deletion (54%) on the topic she was least familiar with and lowest percentage (22%) on one of the familiar topics (i.e., New Year’s Day). In the presentation, the mean percentage of final stop deletions was lower (22.95%) on the familiar topics than on the unfamiliar topics (24.61%). The difference was, however, not deemed to be significant by the Wilcoxon Matched-Paired Signed Rank Test.

Subjects’ responses to the interview questions provide valuable information regarding issues such as how the subjects selected familiar and unfamiliar topics, how the presentation content was selected, which aspects of language affect subjects’ performance on the two types of topics. Most subjects reported that their decisions in selecting the topics and content of their presentations were based not only on the degree of familiarity they had on certain topics or content but also their language ability in expressing themselves on the topics and content. Most subjects noted that they tried to avoid those topics and content on which their language abilities were limited.
In the course of the presentation, most subjects reported that their language abilities were the major constraint for their performance for both familiar topics and unfamiliar topics. The lack of vocabulary was especially perceived as a major obstacle for the presentation by most of the subjects. The familiar topics were considered to be easier to handle than the unfamiliar topics to present in terms of contents selection and organization.

With regard to the relationship between subjects' perception of their performance and the results of the quantitative analysis, it shows that the subjects' perception did not always correspond to the results of the quantitative analysis. The perception that three male subjects had regarding which familiar topic they performed the best corresponded to the results of quantitative analysis either in terms of syntactic complexity or fluency. Three female subjects' perception concerning which topic they performed the best did not concur with the results of quantitative analysis. For the female subjects, the mean length of T-units was the longest on the topic other than the one which they considered themselves to have performed the best. The same was true for the fluency of their speech.

As far as the syntactic accuracy was concerned, the highest error rate and the lowest error all occurred on one of the familiar topics. The data showed that all the subjects had the highest error rate on one of the familiar topics. In addition, four out of six subjects had the lowest error rate on a familiar topic.
other words, the subjects made either the most or the least number of errors on the topics they were familiar with. Moreover, the error rate seems to be related to the grammatical complexity of the oral production. Three out of six subjects had the highest error rate on the topic in which they had the longest mean length of T-units (i.e., subject MJ, JJ, HY).

Implications for Pedagogy

Two pedagogical implications can be drawn from the present study. First, the topic variable needs to be taken into account when teachers assess students' oral proficiency. The findings of the present study indicate that the extent to which second language learners' are familiar with the discourse topic has a dramatic impact on the fluency of their oral production. Hence, a single test does not reveal the complete picture of a student's oral proficiency because the topic may help or hinder their performance. In order to make accurate judgments about students' oral proficiency, teachers need to have students speak on more than one topic.

Secondly, in classroom instruction, it is difficult for a teacher to choose topics which all students are interested in, familiar with, or willing to explore. But this does not mean that the teacher should avoid those seemingly less interesting or less engaging topics. On the contrary, it sets high demands on the teacher to strike a balance between the topics chosen and the activities built around the topic. If the teacher assumes that the students are not familiar with a certain topic, he or she may assist them to build up both their content knowledge and linguistic knowledge by providing "advance organizers" (Ausubel et al., 1978) in...
terms of related reading assignments and pre-introduction to the topic. The classroom activities should be designed in a way that learners can practice orally on the topic introduced.

Implications and Recommendations for Further Research

The present study described the relationship between the discourse topics and second language learners' oral performance. Most researchers (Selinker and Douglas, 1985, 1986, 1989; Whyte, 1992; Cornu and Delahaye, 1987; Zuengler, 1989) investigating the topic-related interlanguage variation contrasted subjects' performance on the academic major topic with life domain topics and found that subjects performed better on the academic major topic. The findings of this study, however, revealed that within the three familiar topics, subjects' performance on the academic major topic was not always better than the life domain topics. Two out of four subjects produced either the most fluent speech or the longest mean length of T-units on the life domain topics. One subject did not even include the academic major topic in her list of familiar topics, while another subject did not choose the life domain topic as one of his familiar topics. Individual differences of this sort suggest that it is not appropriate for a researcher to assume that the academic major topic is the familiar topic for all the subjects. This also implies that researchers need to take the time to discover what topics
that subjects are or are not familiar with before assigning a given topic to the subjects.

As highlighted in Chapter 2, a number of methodological problems existed in the area of topic-related interlanguage research. Some of the studies compared the data elicited by different interviewers (e.g., Selinker and Douglas, 1985, 1989) who had a researcher interview on the major field topic, and a research assistant who was a friend of the subject interview on the life story topic; or by various tasks (e.g., Selinker and Douglas, 1986), who compared the data collected from an interview, and a mini-lecture. In a research design of this sort, it is very likely that an interlocutor factor and task variables serve as confounding variables in the study. The present study tried to avoid an interlocutor factor by collecting data from L2 learners' oral presentations and natural conversation with three interlocutors who had been well-acquainted for a long time. The results showed that the subject JJ's speech was more fluent and her mean length of T-units was longer on the familiar topics both for the presentation data and conversation data. Her highest error rate was, however, on one of the familiar topics for the presentation data, but on one of the unfamiliar topics for the conversation data. Whether or not this difference was derived from the task difference or from other non-cognitive and non-linguistic factors such as stress calls for further investigation. Studies of this sort are significant in the field of second language acquisition research because they could provide insight on how
discourse topics interact with other factors such as tasks and interlocutors. Researchers could ask subjects to speak on one familiar topic with several interlocutors or in various tasks (i.e., interview, natural conversation, presentation) to investigate the interactive nature of discourse topics and interlocutors and tasks.

Although the difference in the group mean length of T-units between the familiar topics and unfamiliar topics was not deemed to be significant, each subject did have their longest mean length of T-units on one of the familiar topics. This syntactic complexity may warrant closer examination. It would be interesting to further examine the subjects' sentence structure to arrive at a clear understanding of factors resulting in the increase in T-units. Researchers could analyze the types of sentence structures appeared in subjects' speech production to have a clearer understanding of whether the increases of T-units result from the addition of relative clauses or other phrases.

In addition, in the interview, most subjects stated that they performed better on the familiar topics in terms of the depth of the content presented. Therefore, further examination of the presentation sample qualitatively is required in order to provide information concerning the subjects' performance in terms of content presented. For instance, researchers could analyze the speech production in terms of how much information has been presented for each type of topic, how the information is organized and how topic is developed.
Moreover, in examining how SLA processes such as language transfer occur differentially across topics, this study only investigate the final stop deletion of the speech utterance. Studies investigating other aspects of language transfer in English learners of Taiwanese such as topic prominence, use of relative clause or third person singular pronoun are needed.

Finally, this study has focused on Taiwanese graduate students studying in the United States. Other studies involving subjects who learn English as a foreign language are necessary.

The limitations of the study

The primary limitation of this study concerns the small sample size. The data of the present study were collected from six subjects. In addition, because the research design of the present study is a case study, the subjects were not randomly selected from a population. Moreover, the subjects of this study only consist of Taiwanese adult students. The results may not be generalizable to the second language learners from other contexts or countries.
Appendix A

Information form

I. 個人資料

姓名: ______________
年齡: _______ 性別: _______
抵美日期: ___________
就讀系所: ___________
攻讀學位: ___________
托福成績: ___________
TSE 成績: ___________
母語: ________________

II. 請列出三個你熟悉的話題及三個你不熟悉的話題

熟悉的話題: 1. ______________
              2. ______________
              3. ______________

不熟悉的話題:  1. ______________
                 2. ______________
                 3. ______________

III. 請簡述選擇這些話題的理由

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Information form (English translation)

I. Personal information

Name:____________________
Age:______________ Sex:______________
Date of arrival in the United States:____________________
Major:____________________
Degree pursuing:____________________
TOFEL Score:______________
TSE Score:______________
First language:____________________

II. Discourse topics

Please list three discourse topics which you are familiar with and prefer to talk on
1.________________________________________________
2.________________________________________________
3.________________________________________________

Please list three discourse topics on which you are not familiar with
1.________________________________________________
2.________________________________________________
3.________________________________________________

III. Please brief explain why you choose those topics

_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________
Appendix B

Transcripts (Error was remained uncorrected. Also, the utterance refers to subject's identification has been deleted)

Subject SK #1

I'd like to talk about a transportation planning model. This model we also call it a four-step model, because there are four steps inside this model. The first one is trip generation. Um, this means we want to know how many trips generated from a given traffic zone. The second model is called trip distribution model. In this model, we'd like to know how many trips generated from, from a given zone to the other traffic zones. The third model is called mode choice model. In this model, we'd like to know from traffic zone i to traffic zone j, Um, how many trips use different traffic mode. Um, that is, umm, in this model, we'd like to know how many trips use different modes from zone i to zone j. The last model is called traffic assignment model. In this model we'd like to know Um, if there are two routes between these two zones, we'd like to know that how many trips use the first route and how many trips use the, the other route. For example, if I live in Buckeye Village, and I want to go to the Ohio State University Central Campus, so, we have two traffic zones: one is Buckeye Village, the other is the Ohio State University Central Campus. Ummm. so if I go from Buckeye Village to the Ohio State University Central Campus. This is a trip. We call this a a a a trip. So a trip is a one way movement from Buckeye Village to OSU central campus. Um . If
there are five hundred students live in Buckeye Village and there are three hundred students go to the OSU central campus. We say there are three hundred trip or there are three hundred trips generated from Buckeye Village. Um. In this case, if the other two hundred students go to the west campus, so the trip distribution will be five, um will be three hundred trips to, from Buckeye Village to central campus. The other two hundred trips from Buckeye Village to west campus. This is the trip distribution. Now we want to talk about mode choice. Support we have two kinds of transport modes. One is the umm, campus bus, the other is auto, which means people, people um, use bus, use campus bus to school or they drive by themselves. So suppose we had we, we already have three hundred students go to central campus from Buckeye Village and there are two hundred s..students use the bus and the other one hundred students drive by themselves. So we said, the, we have two hundred trips from Buckeye Village to central campus use bus and the other one hundred trips from Buckeye Village to central campus, they drive themselve..s. The last one, the last model is traffic assignment model. If we, if we go to central campus from Buckeye Village we have two route choices. The first one is we use Lane Avenue, the other one is we use Woody Hayes. Um, suppose there are six of the the one hundred trips from Buckeye Village to central campus they use Lane Avenue, and the other forty trips they drive by themselves and they use Woody Hayes. So, in this example, we know

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I'd like to introduce the influence diagrams. Um, an influence diagram is one of the methods to present decision problems. There are two components in an influence diagram. One is nodes; the other is an arc. There are three types of nodes in an influence diagram. The first one is a decision node which we use a rectangle to present a decision. The second one is a chance node. We use a circle to present a chance. The third one is a value node. We use a diamond to present the value. Three are three types of influence we use in the influence diagrams. The first one is a probabilistic influence. In this, in this kind of influence, if we have two nodes, two chance nodes and we have an arc to connect these two nodes, we said if the outcome of the second nodes is influenced by the probability of the first nodes. We said that's a probability influence. Let me try again. If we have two choice nodes and we have an arc connect, connects these two nodes which mean the outcome of the second nodes, the outcome of the second chance nodes will be influenced by the first node. We call this a probabilistic influence. The second type of the influence is value influence. In this type of influence, we said the value is influenced by the decision or by the chance. For example, if we have a chance node pointed to a value node, we said the value is influenced by the
chance++ by the decision. If we have a chance node which points to a++++
value node, we said the value is influenced by the chance. The third type of
influence, we call it structure influence. The arc here is just show the structure of
the+++, of the influence diagrams. The arc here does not exactly have to have
some special meanings or the... some types of influence. It just show the
structure to present the all situation. To sum up, the.the influence diagram is one
of the methods to present decision problems. We have two components: one is
nodes... one is a node; one is the arc. And there are three type...three types of
node..s: a chance node, a decision node, and a value node. And there are three
types of influence. The first one we call it a probabilistic influence. The second is
value influence. The three one is structure influence.

#3

Travel time is one of the measurements to evaluate traffic conditions. Travel
time is the time that a traveler travels from an origin to a destination. Travel time is
a function of the free flow travel time, the capacity, and the flow. This function, we
call it BPR function or Link Performance function. The free flow time means if
there is no other+++++ vehicles on this link, we travel from a point A to point
B+++++++++++ The free flow travel time means if there is no other traffic on this
link, how much do you, do a traveler need to travel from po..point A to point B.
The capacity means how many vehicles per lane per hour...on this given segment.
If we know the free flow travel time and the capacity of the given freeway segment,
we can obtain the link. If we have the travel. If we have the total. If we have the free flow travel time and the capacity and the volume on the link, we can find the travel time of this link. If we have a network which has more than one link, we can sum up all the travel time on this network to evaluate the traffic condition of this network.

#4

Computers are widely used nowadays. Basically, a computer includes two parts: hardware and softwares. The hardware includes a monitor, a keyboard, and a hard driver. The most important component in a hard drive..driver is the CPU and the size of the memory. The CPU is the central process unit which decides the speed of the computer. The memory decides how many data a computer can store. Personally, I believe that a computer is a very powerful tool especially used to restore data and used to do the complex computations.

The speed of a computer is very important, too. IBM has developed a new super computer recently. And they use a chess program to test the speed of that super computer. There are a lot of softwares used for various fields. For example, Excel and Lotus and Dbase are used to store data and do computations. Microsoft Words is used to deal with documents.
America people do like sports. Actually they are mad about sports. You can see the .... you can watch the...the sports on Saturday afternoon on each of the television channels. They have different seasons for different sport. For example, I guess it's basket ball season right now and um, and they play footballs in college and they have professional football teams around the nation. Well, Ohio State has a good football team and they went to play Rose Bowl last year. And they are.....they...they...they are the champion of the Rose Bowl of 1996. Michael Jordan is very famous because he plays basket ball very well. And American do have the best basket ball team all over the world right now. Umm. I went to a soccer...soccer play um, a couple of weeks ago on a Saturday... on a Sunday afternoon...in a Sunday afternoon. Um. She is our neighbor. And she was in a football team, a community football team and they have a ... had a game that afternoon. And there are a lot of teams there.

For lunches, they eat sandwich or hamburger. They always have fries, potatoes, and some pop like...like Coca-Cola, Pepsi, or Sprite like that. And for dinners, if they have a formal dinner they might go to a steak house. And, well the steak is....the steak is really good here, especially median rare. Um, the side
dishes are salads, or some soup : chicken soup, or vegetable soup, beef soup, and there always dessert after the meal. OK. Well, I guess most...most of the...most of the American food are sweet and well, they don't want fat. They don't want calories. Oh, no, they don't want fat. Yes, they don't want fat. They don't want calories. Ya. And American people like coca so much. Well, I know the headquarter of Coca-Cola is in Atlanta, Georgia. And I like their ad...advertisement- Always Coca-Cola. And American people like potatoes so much. They can not live without potatoes. For example, if you order a burger, you might have fries...fries. If you go to a steak house or a resturant, you have a backen...a baked potato or a mashed potato. The snake is potato chip. Everything is potatoes. Even in the grocery store you can buy pota...buy a bag of potato in three pounds, five pounds, ten pounds...ten pounds, even fifteen pounds.++++ (potato) (+++) Umm.++++++++++++++++ I went to Bob Evens several times and++++++++ Well++++++++ I do like the steak here. Umm,++++ and I like the liver. There is a resturant in Wooster, Ohio. They server good food like liver and steak.+++++++ And+++Ok,+++ there is a news about McDonald. The sell the Big Mcg in 55 cents. That's because the market is so competitive right now, so they decrease the price, they hope to have more customers. So they can sell more burgers.+++++++++++ American eat... American people eat turkey in Thanksgiving.
Um for most of the people Africa is mystery. Um including the culture, the living style, the landscape. Most of people live in Africa are black. Um, the living style is so simple and nature. So, most of the countries, their economic are depends on agriculture. So, they are kind of poor. Not like the develop, developing country and developed country. The natural resource is so important in Africa including the landscape and animal. There are there are, there are, cups of famous national park in Africa. Every year so many people just go there and see animal and feel what nature is. Some people just like to travel in Africa because it's so romantic and fashion. and but I don't think it's romantic because it's so hot. You can you can not have the patience in that kind of temperature. One famous painter, he like to trave in Africa and draw the Africa people. His name is Wu hsuan san. And his friend Li-teng hui told him you should you should paint Taiwan more not just paint the Africa people. Because it's your home. Taiwan is your home yeah. We think it's joke, oh, maybe. um, Africa, ...His name is Patric. Patric hometown is is Wu-kan-ta. Patric don't think his country is good, but hewant to go back to run a hotel business. um most of countries in Africa are not are not democratic. So they almo, they always fight. So the people is is so pitiful because they can not living well just because of the war.
um, swim is a very good exercise. When you swim, you can feel every muscle is working. So, the expert saying that swim is the best way to exercise because it can improve your lung function and heart function. yeah, and you don't and you won't get the sport injury. I like to watch people swim to swim because I can not swim. I try I try so many times. But it just can, I just can, I just can not swim because I am afraid to immerse in the water. And I can not float in the water. Yeah, so, um, It just to hard for me, yeah, because, um, I like to, I like to just play in water. But I just, I just and I am just afraid to be in the water. So I think I am I am a land bug. There are so many kind of swim position, procedure. Most of the procedure style um, are look, um, most of the procedure style just look like animal. For example, like a frog, like a butterfly, like a dog yeah. So, the swim style are named name by what it look like, um, swim, I think even you are a good swimmer, but you need to be careful. Because every every year so many people just die when they are swim. So, It save. It's so important. you can not just jump in the water everywhere. You need to be, be careful. And you need to be, and you need to know the area very well if it save to swim.

#3

Tea is a traditional Chinese drink. The Chinese tea is so different from the herb
tea, the western style tea. So Chinese tea just taste like true tea. And the herb tea taste like garlic. um. Although I am no the tea lover, but I like to smell it. yes. When you drink tea, first you will feel a little bitter, then um, after swallow the tea, you will feel um just like sweet around the throat. There are so many kinds of Chinese tea. I think the difference is the process of making and when the tea leaves is pick up. Wulong and kuanyin is more popular I think. And some people say the spring tea is better than summer tea. So, the price is more expensive. And one culture is so special. In old times, the tea leave is pick up by men not by machine. And the man and woman, boy and girl, work in the tea plantation. They will sing the song to each other. Um, most of songs are love song. So they can express feeling to each other when they, when they were work, working. Um, tea, The formal tea art is so complicated um, including the tea pot, tea cup, the tempature of boiling water everything just, just just so important. But most most of people, um, when when most of people drink tea, I think they won't they won't do that. It take so much time and drink just a little bit, yeah, um, tea, somepeople say tea is not so good because it contains caffine. Caffine will just will interfere your sleeping, and your blood pressure. But somepeople say it's healthy yeah. So I think the point is how much you drink in one day. I think maybe two cup of tea is good. And If you drink more, if you drink more than two cup two cups one day, it's not so good.
Glouds is old German. It's a long time. Clouds was an officer in GATT. Our government, our government invited him to come to visit Taiwan. Yes. Both of them love nature, are mountain lovers. So just become friends and write letters to each other in the past years. Two years ago, the summer, we went to the Jonnyberg to visit him. We stayed there for twenty-one days. So we know Glouds more and deeply. We feel Glouds is a lonely old man although her body and energy still fine because Glouds just devote and her his sons is so far away from him. Glouds said children just temporary gift one day they will go their own way, so sadly. During that 21 days, we can see and feel Glouds' life is so simple. There is no TV, no microwave, no fancy stereo system in his home. He just listen to the radio to know the news from the world. And the radio is so old. And Glouds' eating is simple too. Just one hot meal, one day and others are just bread, butter, sausage, carrots. Glouds love to eat chocolate. Yeah, Glouds love to hike in the mountain because right now he is retired so he can use all his day to enjoy in the nature. If the weather is not so bad, he just drive his car to the nature and hike in the mountain for one day or even stay night there. Christy is Gloud's girlfriend. She lives with Glouds. She is also Gloud's housekeeper. She is a Phillipino. Glouds love her, loves her very much. You can feel it because when we just went out and Christy with us Christy need to work for other people. So sometimes she
cannot go with us to visit nature every everytime. If we went out on Sat. or Mon, Christy will be would be with us to go out. And you can see Glouds is so excited. He would just love to love to take the picture of Christy, one and one and one, yeah, and just like a young man in love, so many pictures. And Glouds love to show us the pictures. he took before. But I think they they will not get marry. Because Christy said she will be back to her country, Phillpine to stay with her daughter, sons. So sometimes I feel so sad. If Christy leave Glounds, Glouds would just alone, living by himself. One time when we just look at picture. there, because it's so many pictures of Christy, and Christy just said I don't know why Glouds keep so many picture of her because she will leave and at that time Glouds just said that's not your buisness. I feel so sad. Glouds, sometimes Glouds is so childish, maybe just childlike. Once we went to the small town just besides the jenevia lake, and Glouds just just took our, his cloth outside of couse he wear the swimming suit inside, then just jump into the Jeneva lake to swim. Shi-Chang and I were so surprised. yeah. Glouds lead us to hike the mountain seem swissland and France. The alp system mountain. Glouds always like to up go up, up,up, until the top of the top of the mountain, the summit. I was stay there just enjoy our lunch and took our nap there, maybe 15 minutes or20 minutes. And we think Glouds love nature more than people because when we just stay on the summit. If somebody, some hikers just just close to us, Glouds will just prepare to leave. She don't want to share the nature the summit with other
people. Maybe Glouds just want to enjoy nature quietly and by himself. But Glouds always complain say people just come to the nature the mountain and make noise like big mouth, ba, ba, ba, ba. Sometime I wonder how Glouds work in GATT because GATT is a one organization he need to just work with so many people. yeah, I don’t know. Christy said Gloud’s personality changed after he retired. SO maybe that’s why.

#5

Joy is our precisous. Now she is ten month old. She can crawl everywhere and pick up everything she can approach. SO it make me feel busy to keep her save. She can walk holding on furniture or our hand. um, she she likes to play “bi-ga bu”, “give me five” and “ ET home” all these game. And that’s a lot. She can say “ba-ba”, “da-da”, “may” all these sounds. I don’t think she understand the meaning of word. But I think she knows who is “ba-ba”. yeah, she understand “no” but not always obey it. mmm, she like to read book. She always read book, yeah, She like to put a lot of book, shih-chang’s book, my book, um her book, even just paper, she like to just grasp, grasp it. um, but one big problem is that she is not intereasting in eatting. So her size is pretty small, her height just, just ,just between 15-20 percenttile. Her weight is um 10 percenttile. SO we worry about her physical development development. So we need to take her to go to the doctor. um two weeks after. um, so that make us so worry about it. We hope her grow healthily and normally. I hope our next baby will love it. Joy love
to see other babys. When she see other babys, she will feel so excited and move her body and make the sound. We are so happy to see her this kind of thing because we think Joy will love people and serve people in the future. Yeah, you should focus on people, they will love them. I couldn't forget the first time we took Joy to the nature-Hocking hill. Joy just look at the tree and light, even wind for a long time. So quietly so curiously. So Shih-chang and I always said Joy is nature baby. Joy is really a Joy. She smile a lot. Sometimes I feel, I will feel frustrated and tired. But everytime when I see her smile, so naive, my frustration and tire will just disappear at once. So, Joy just so precious to us. Every good and perfect gift comes down from the Father. And we are so glad his bless us with such a beautiful gift. Yeah, Joy is so special bless from God. Oh, God, hope you give us wisdom, love, and strength to nurture Joy. And one day she will be a good christian to love you love people, to serve you, serve people, to be a good testimony, a good example, to lead the people to turn you.

#6

Pregnancy is very important because it relate to two persons: you and your baby. So just take care of you, both of you. um, I think weight is the most thing in our mind when we are pregant because it affect our body very much. But when you are pregant you are responsible for your baby's health. so just make sure you get enough nutrition. um, You may get, get weight 25 or 35 pounds in the total pregancy. So just enjoy your pregancy. It's bad to gain after this weight than to
get too little weight. um, in the first two master, that means the first three month of pregnancy. Some of you will feel uncomfortable, nausea, and don't want to eat anything, we call it morning sickness. yeah, some study shows that if you got enough nutrition before you you are pregnant, maybe you can just just skip of this suffer, suffer. So that's mean nutrition is so important. If you have morning sickness, just just take care of yourself. Usually, we just eat some cake after we just get up. I think eat something is better than just eat nothing. And during the total pregnancy, you need to avoid Caffeine thing, for example, like tea, coffee, and chocolate, and avoid smoking and wine too, because this will affect baby to develop their brain and body so you need to think about this it's so important and make sure you are away from these thing. then when you when you are going to the second trimester, you will feel more comfortable because this time, this period you will feel more energy, so we think this is enjoyable time in your pregnancy because this, you will feel just comfortable and maybe you can accept the your baby, your body in this period. So you don't mind your belly getting bigger, and your face getting rounder.

Subject SJ #1

Good morning! Welcome to Natural Resources two twenty two. I, if you don't take this course, it's a good time for you to leave. OK, now let's introduce myself. .....I am from Taiwan. I will be your T.A. in this course for this quarter.
My native language is not English, so maybe my pron-pronunciation is different from yours. So, if you have any problem about my pronciation during this quarter, please feel free to ask me during the lectures. I will be very glad to explain it to you again. I graduate from National Taiwan University. My major is Mechanical Engineering in college. But after I graduate from university, I found I love nature too much. So I change my major. Now I am a PhD student at the school of Natural Resources. My major is Environmental Education and Interpretation. Before I came here, I worked at the National Park in eastern Taiwan. I leave in mountains. It's such a beautiful places. OK! now, let's talk about this course. The textbook we are going to use this quarter is: Elementary Statistics. Uh, the price is above sixty dollars. You can find this textbook at OSU book store or at long's book store, also you can find a copy uh in the open reserve at agricultural library. Duck-Dr. Christinson put one there. So, if you can not afford this book you can use that copy. My office hours is nine a.m. to ten a.m on Tuesday and Thursday. My office is in room three seventy six Kottman Hall. Do you know where Kottmen Hall is? Uh, its on the west side of Orientangy river and you can take campus bus and take off the bus at agricultural library and cross the cross the high way, then you can find Kottman Hall. If you still have some problems about the location uh please tell me after the lecture. If you have any questions about the Statistics, I encourage you to ask me during my office hours. I will be very glad to help you. There are there mid-terms for this course, and you can you can
find the you can find the date in the schedule I gave you. Each one will count seventeen point five percent, and the final exam also count seventeen point five percent. In addition, your homework will count thirty percent of your final grade. Your final grade will be based on class curve, that is, the first twenty percent of you will get the grade A or A minus. If your score is between sixteen percentile and eighty percentile, your grade will be B, B plus or B minus. If you, your score is between forty percentile and sixty percentile, your grade will be C, C plus and C minus. and so on. In term of your homework, you need to turn in your homework each week. Uh, I don't accept late homework. If you turn in your homework late, you will receive some late penalties. Basically, I will subtrack ten points from you homework if you delay one day and twenty point if you delay two days. OK? And don't forget to write down your name in your homework and staple your homework. Otherwise uh it will be difficult for me to recode your scores or grade your homework. According to my past expierencees, I understand most of the American students don't like statistics very much. But this course is required for each one of you. I understand some of you may feel difficult to learn this course. So I recommend you study the textbook before the lecture. Don't be behind the schedule. The textbook we are going to use is a very good textbook. It's very clear and there are a lot of examples there. So, you should read it by yourself before you come to the lecture. So, you will have better understanding about what we are going to say. There are no pop quiz in this course. So, don't
be worry about that. All of the exams will be announced in advance. OK! Any questions about the syllabus? If no, we will start to discuss Chapter one "Descriptive Statistics".

#2

I am a mountain lover. I always think the spirit of Taiwan is in the mountains. In my childhood there is only one mountain in my mind. Her name is yang-ming san. In my memory, that is a very interesting place, place. My father or my grandfather usually brought me to visit there. There are so many trees and flower there. The fresh there seems different from Taipei. That's all I remember. Although I have only this mountain in my childhood, I feel so content. And then I grow up eventually. I live in apartment in Taipei. One day, I go to the top of my apartment. I look around and I find surprisingly there are so many mountains surrounding Taipei city. It attract me so much. And then there are so many mountains in my mind not only one. Then I said goodbye to my childhood, I also say goodbye to the happinesss in my childhood. I enter the junior high school. At that time, we need to study very hard in order to pass the high school entrance exam. All the dreams in my mind disappeared. The most important things in our world is score. We need to get a high score for every subject. Of course, all those mountains in my mind also disappear. The school doesn't encourage us to touch everything outside the textbook. However, the textbook make me confused. The textbook did not teach us everything about Taiwan. For me, at that age, I
love mainland china so much. I am so familiar with Chang chiang, huang ho, and so many places in mainland china. But it's a shame for me that I don't understand very well about the land in which I grow up. When I think about this point today I still feel so sad. That sad situation was changed when I enter my high school, chien kuo kao chung in Taipei. When I was sixteen years old. We went to climb the second highest mountain in Taiwan—hsueh shan. It is a very important point in my life. The first time I found Taiwan is such a beautiful place. That time, I listen to the sound of the forest. We lie down on the grass under the moonlight. We take a nap in the wind. We took a hike at night. And when we stand on the top of the mountain, we can see, we can saw so many beautiful mountain surrounding us. The trip of Hsueh shan lead me into the beautiful world of mountain in Taiwan. Of course, all those dreams about mainland china disappeared. The central mountain range, the hsueh shan shan mai, lan yang hsi, ta chia hsi, cho shui hsi, all these places in Taiwan become so real in my mind. I became to fall in love with Taiwan. This beautiful land where I grow up. But mountain are not always beautiful, sometimes they are very dangerous. When I was seventeen, one of my friends die in mountains. When I was nineteen years old, another friend die in central mountain range. Until today, I still feel these two events are like a dream. We continue to grow up. And these two friends of mine stop there in my mind, they are always young. The death of my friends made me sad. But also mountain make me understand to be afraid and humble.
in front of them. Finally, I found I can not overcome mountain forever. What I
overcome is always my fear. But my love toward mountain is so strong, or even
stronger. So I still climb a lot of mountains which are higher and more remote in
Taiwan.

#3

The topic of my dissertation is an assessment of environmental leadership and
analysis of predictors of responsible environmental behavior held by secondary
teacher in Hualien county of Taiwan. First of all, let me define the term of
environmental leadership and responsible environmental behavior. Environmental
leadership include cognitive domain, affective domain and responsible
environmental behavior. That is, if you are present with enough environmental
leadership you should have environmental knowledge or the skills about how to use
environmental behavior to improve our environment. Or you should have the
knowledge about the environmental problem and issues. In addition, you should
have some affective characteristics like locales of control environmental
responsibility, environmental sensibility. And finally, you should have
responsible environmental behavior. And what’s responsible environmental
behavior? In my study, it refers to environmental action available to individual or
group for use in preventing or resolving the environmental problem or issues.

Based on previous research, responsible environmental behavior is divided into
five categories. They are ecomanagement of consumer action persuasion, legal action, and political action. And why do I choose this topic as my dissertation topic? Basically there are some reasons. The first, because responsible environmental behavior is so important in the field of environmental education. Responsible environmental behavior has long been recognized as the ultimate goal in the field of environmental education. But in Taiwan, there is a lack of research relating to responsible environmental behavior and environmental leadership. Without these information, it is very difficult for us to develop a responsible environmental behavior model for Taiwanese. If we don't have these information, how do we develop an effective environmental education program for Taiwanese. In the past, most of, most efforts in environmental education in Taiwan focus only on awareness level of knowledge about ecology. Unfortunately, research has shown only knowledge cannot lead behavior change. And if we don't have behavior, we only have a lot of knowledge or positive environmental attitudes, we still cannot improve the quality of our environment. So my study can fill a lack of research relating responsible environmental behavior in Taiwan. The second reason is, is think globally, and act locally. Why do I choose Hua-lien county of Taiwan? And why don't I choose some big area like Taipei city or the whole country of the, of Taiwan. Because most environmental education programs are developed at local level. And in hua-lien county of Taiwan, there are also some local environmental education program developed.
If I choose this topic, I can provide some useful information for my friends there. I can provide some useful information to Toroco national park to Hua-lien county government, to some local environmental education organization or environmental protection organizations. They can use the results of my dissertation so I can contribute something to them. I feel happy. The third reason is the need for Hua-lien county. Because two years ago, Dr. Rod and I conducted two studies in this area. And we found the community leader in this area has high level of environmental knowledge and has positive environmental attitude and have enough awareness of environmental problems. But they seem to lack enough responsible environmental behavior. They also lack knowledge of using environmental action and skill of using environmental action. Therefore, this study can help us to understand more about Hua-lien people responsible environmental behavior.

#3

The Turkey I am going to discuss is a country, not a animal like chicken. Turkey is a country between Asia and Europe. Um in the textbook, I did not learn much about this country. So I am not familiar with this country. But um, if I were Turkish, if I were Turkish, I think it will be very interesting because I will be confused about if I am a Asian or European. Turkey is just like a bridge between these two continents. So in history, there are so many important events happened in this country. About Turkish, in the past, I usually think Turkish are more like black
man because they are dark, their skin is dark. And their country is close to African and close to mid-east. So I think the people must be belong to blackman. But when I study in the US, I saw so many Turkish. And I find, oh, they belong to white man. Actually, their skin is pretty white. Especially when they were kids. But maybe because the sun in the mid west is so strong. So, therefore, most of their adults especially the male adults have a dark skin. and Turkish, the people in Turkey are mostly Moslems. and they are so religious, I have one Turkish classmate in my department. um he needs to pray five to seven times a day. Even during the lecture, he will go out and pray for their god a-la. And I am still wondering why they want to call their country Turkey because it is similar to our Christmas Turkey. Don't they think it's funny? or maybe in their language Turkey and Christmas Turkey are different word and different pronunciation. They don't have this kind of concern. But for me, whose mother language is not English it makes me so confusing. When I heard about Turkey, I don't know you are talking about country or talking about a bird. Ok, I hope all Turkish have a happy life and they can establish a good society. And also I hope Turkey can play a important role to promote peace talk in mid-east. I think God, no matter, I think Gods does not want wars, so we should cooperate with each other to prevent wars and to live harmoniously with each other.
I am not familiar with beauty shop. Um, in my memory, I think I only visit beauty shop a couple of times when I was kid. I think beauty shop is a place um which is full of womans. A lot of womans get together and try to change their hair styles or try to make them um more beautiful. Um As I can remember, when I was kid, um if I went back home early from school, if my mother want to go to the beauty shop, she will brought me with her. And I will sit I will sit in a beauty shop. Actually, I have nothing to do. But I like the smell in the beauty shop. It smell good. But sometimes I can smell some smell of chemical material because when woman um burn or perm, um I I forget that word, actually make their hair cury. They need to put some chemical material in their hair. So I don't like that kind of smell. And beauty shop also remind me of my grandmon. She is so traditional. She always visit the same beauty shop, maybe once a week to wash her hair. And her hair is so long, so she can not wash by herself. She need some help from beauty shop. I think beauty shops are also a good place for woman to, to socialize with each other. They can exchange a lot of experiences or if they are depressed or they are sad, or they don't have good mood, they can go to beauty shop and they can talk with each other. So maybe they will feel better. In the past, beauty shops are only beauty shops. They just deal with some hair, hairs or something about the woman. But now, in the past decade, it eventually changed. Some beauty shops in Taipei, have some illegal deal like sexy service. yeah, it so bad. I think
the government should try to prevent this. They should enforce the law. They should find them. So we can improve our society.

#5

I don't know much about the linguistics. I think it's something about how to teach people talk or how to understand a language and how how to understand people's pronunciation. That's it. Actually, sometimes I feel linguistics is, is a very boring for me. I don't I don't like to, to I don't like to learn some new languages. I think I don't have this kind of gift from God. So when I learn some new languages, it will take me a long time to learn it. Ummm, when I think about linguistics, sometimes it reminds me of my neighbor.... Her major is linguistics. As I can mem, remember, she is always busy. We had been neighbor for three years and when we see each other, we will smile to each other, but I found she is, was always busy. And when when I enter her room, usually I can not find a place to stand because all the room are are filled of books and paper a lot of stuff. Maybe linguistics make us crazy, there are too much things we need to learn. If if our major is linguistics. But if my major is linguistics, I think I will die. um yeah. Another thing about linguistics is about my English 10, 105. Because I am a foreign TA, so I need to take English 105 and Mcteaching test before I can teach in the class. Um most of the instructor in that course are major in Linguistics. I remember one female teachers called Elizabeth. Her major is also Lingisitic.
think she is a very nice teacher. She can understand my pronunciation problems immediately. And she know how to correct me. She is so kind and patient. So I learn a lot from her. This is the first time I find linguistics is so useful. yeah, yeah, so, so it's still necessary in this world. Somebody still need to learn linguistics so they can develop some good teaching programs for us so everybody can learn language more effectively or or um um um. I think linguistics is also important when we um when we do a research about culture or human beings. For example, if I would like to to analyze mountain abrigional tribes language, yeah I think linguistics is very important, Usually, language is so correlated to culture. So if we would like to understand the culture, we need to know their language. And linguistics can help us to analyze all these problems. Ok, that's all I know about the linguistics.

Subject MJ #1

I can drive, but I am, I am very afraid of driving. I am not good driver. And I always feel dangerous when I drive. And I don't know, I mean, I don't I don't know much about car. I mean like their, um, it's I mean like its body and the. And I'm I fear speed very much. But I I don't, I I I don't mean, um, um, how to say this, I mean if the driver is not me, then I feel ok, but if I have to control the car, then I, then I I feel uncomfortable because of speed, speed. But if I just sit in the car, and then my friend drive, give me a ride to anywhere, and even he or she speed
up, I don't care, it's pretty fine for me. But I think my problem is I can not control the car pretty much. So I always feel dangerous when I drive. And I think probably because I always I can not, sometime I can not concentrate on my driving and I think I think many things, I think probably I am tired. I just I always absent minded when I drive so I I just can not concentrated on the driving. That's why I feel dangerous and uncomfortable when I drive.

And Car, but car is really convenient for people to transport, transpo, and transportation and car, I like family car, I don't know why, but I like family car um, because I I always think about the future. And I like my family, all my family can get into my car and we can go anywhere, so I like family car, a big car, so that every every family member, every family member can get into. um, I think because because I am a dangerous driver so I sell my car, I sold my car when my roommated can not share with me um, car, I don't any, I don't know any technique about car, about how to fix something in the car, I think I should learn, But just lazy to learn. Car. Everybody say in the US, driving is easier than driving in my contry. I don't know, I think it's the same thing because when I can not control the control driving then I got trouble. It's not the environment, it's myself. It's my problem, it's not um outside problem. And yeah, so I think it's psychological problem for me to drive a car. If I can, If I can, how to say it, If I can conqure my my pshchological problem then then I think I can control driving better than ever.
I would like to say that I am not familiar with my brother-in-law. My sister married to him, I think about three or four years yeah. But my brother-in-law and I seldom communicate or you know just have conversation with each other, seldom. And I don’t know why. What’s wrong with us? Because see, my sister get married with, to him about four years, I just know, I just don’t know my brother-in-law, it’s kind of strange. I think probably, when they decide to have a wedding, my family has a, my parents disagreed, disagreed with them. My parents just think they don’t they didn’t know each other very much. They just dated for about a half year, and then they want to, they wanted to get marry. And and also my parent think he is not a good. He may not, um how to say it, he doesn’t match, or maybe say his family doesn’t match my family. Because his family is in east Taiwan, and my family is in south Taiwan. And he doesn’t have a mother. Um, I heard um, his mother just escape away from his family just run away, just ran away. So, I think my parents think he doesn’t come from a good family. So I don’t know, he always keep silent in my parents house. And yeah, their wedding, I mean my parents and my sister had big big argument. When my brother-in-law decide to have a wedding. Um, I don’t know how to know him. Sometimes I think because now he is he is one of family member, so I like to talk to him. But he seems he seems don’t talk to me, the way, just keep silence, and very serious and the only one person he can talk is my sister. He makes me feel like we will hurt him, you
know, But as I know, we accept him, otherwise, we we won't agree with the
wedding, their wedding. I really like to know him a lot, more and more because I
think it's important for our relationship. yeah, And I really feel sorry that I can not
know him. yeah, maybe I don't know, Maybe I should try hard

#3
My mom is a very dominant woman. And she is the most important person in my
familiy. And all the kids in my family rely on her very much. We always called
mom, I need something, mom, I want something. Or, We we like to talk to her
everthing. Everything happened in school, in our life. She may be, she may be
a listener. But she always has her oppinion. She like us to follow her rules.
And because we we rely on her very much. I always say all the kids in my family
have Oedipus complex. And even my father always follow her rules, listen to her.
And she is, she has very strong personality. Um, she always think she is right in
everything. So, and if our thinking is against her rule, um, I will say, both of us, I
mean, like my mom and I will hurt each other. Because we can not, because I
don't like to follow her rule, and she think I, I am not submitted to her. And maybe
this is my family problem yeah. Probably, becasue I am the only kid who always
who always has different opinion with her. And I argue with her all the time. but
she still influence me very much in my whole life becasue she is my mom. She, I
think she is is not only a political role but also a economic role, I mean important
role modle in my family. And because my father is the older, the elder kid in my father's family. so, My father has six brother and six sisters. My mom seems like um, I mean, she has big responsibility in the whole family. When she married with my father, she got big big pressure and responsibility in my father's family. So that, I will say, it trained her or equipped her to be a strong model, a strong role model in the family. She is a very strong, strong woman. Um, everything um, how to say this, I don't think she is, she has power, or maybe cabability, or competence to deal thing, kids things, her husband things, and it's incredible. And that really influence me a lot. um, my mom. I think she influence me how to see things, how to deal with things, how to face a reality. And yeah she has, she has her life philosphy. I will say yeah,because I grow up in the family, her life philosphy sure surely influence me. It's not good or bad influence. It's not the issue. but it's kind of it's a dominant way or it's a dominant thinking or philosophy, I will say, becase I just say she wants us to follow her rules, And that way influence I mean my brother, my sister, my sister and I a lot. Becasue she wants she wants us to think with her way, even thinking ,even thinking,even talking, And she think she is right all the time. She think if you follow my way you will be fine, you will be great, you will be perfect. That maybe. I think that may be the reason I always think about resistance away from my home or something. But I think it's a difficul feeling. I will say I still love my mom even she is so dominant in my life.
#4

As I said before my major is communication, my focus my interest is critical culture study. And for me, um, cu, I would say culture study is something um, let me think, how to define it, it talk about, it talks about what is going on in our culture and how do we survive in our culture. And sometimes, I would say, critical culture study provide, provide a way of resistance, I think, just like feminist, we think about gender issue in the culture, in our culture. It's an example. Maybe like racist problem in our culture. And I think maybe I should focus on something and talk about it. I can talk about my dissertation project. And my dissertation is something about gender and technology. And I, I think about using um, a post modern feminist approach to interpret gender technology phenomena. And Why I interest, Why am I interested in this topic that's because, I feel like everybody said technology is neutral, But for me technology is always associated with masculinity. It's kind of. It's kind of I mean gender issue here and because technology generated, ed. And so women in our culture especially for patriotic culture. We feel like we fear to face technology because it is masculine it's not feminine. That's why I say technology is something. But this something this is has been generated. And my approach would like to apply female body theory because I am interested in female body. You can see the interaction between female body and technology machine or something. It's very subtle.
will say. It's not just just physical. It's something like psychological here, I mean involve this issue because as people said women are not it's not belong, but familiar with um, like science science technology thing. But I don't think, I think there is problem here because that's culture teach us, culture tell us, culture tell us, women are not familiar with something. But it may not true. and it just like brainwashed. We don't we don't have to learn we don't we don't touch it. But in our mind, we think we think we can't we can't do it. I think there is, it's a problem here. It's a gap between female body and machine. And that's why I interest it. I think I will write about it in my dissertation. Actually it's my big focus on this issue.

#5
I am going to talk about myself. And, um, And, I am from Taiwan. And, I uh, I come to the United State for um persuing my um gradute study here. And, um, how to introduce myself. My major is communication. Um, I come from a family, um, I mean my fam my family has um parents, my um two brothers, and one sister. And, I I feel like I am I am a strange person in my whole life. And I like strange things. Um, for me um, new things always attract me. And I like to um to try every, I mean any new way in my life. And, what else? OK! I am I am female. Uh, and, maybe I can talk about my experience. OK! um, I have five years teaching experience in Taiwan. And, I think I was a terrible teacher because I can not communicate with student smoothly. And I um I just I just blame
them always, all the time, because when students can not um, can not study hard and get bad grade and I will, I will blame them. So I think I am a horrible teacher. But when I came here, I, I, I mean, I observe teahers in the US, And I learn something here. It's different from I think from the way I I had, I have. And I will say may profe, profe, um, the teaching way of my my professor influence me very much. And I think if I I go back to my country I maybe change a lot, I mean in my in my teaching way. um, what else. I think, I think probably because I I like new thing so so I choose my major in critical culture study, I think because, um, the theory in critical culture study always, always, offer, I I feel like they they offer new approach that I can I can see things differently. So, I think it's it's because of my personality I choose my major. It's relevent. What else, my family, Ok, My elder brother and my younger sister have married. And my my elder brother has a son. And Maybe I can talk about my past. Ok, Why did I say I am, I was a strange person. I, I think because I had bad temper. And I always got angry with many many things, even like a small thing. And Like when I was very very young, probably, probably, five or six year old, And I I had an argurment with my big brother, and from from from from that from that day I I wouldn't, I wouldn't, I wouldn't talk to my big brother, until until maybe I will say, maybe I will say God save me. So it's about 25 years. I couldn't I could't say a word to my big brother. And that's why, why I always think I was a terrible person because I can not accept myself even. I mean I don't like myself. But I just can not say anything to my big
brother. Even we, we live in a house together. We are in the same roof. But I just can't talk to him because the little argument when I was young. And that's me, yeah.

Subject JJ #1

I didn't have much feeling about American. I mean special feeling. I just, I just came here to study and all I want is go back home to have my own career. I never feel close to American, to this country — America. Probably because this is not my country. But, sometimes I do envy the American people, envy them have so many 'tsi-yuan' ('resources' in Chinese) things they can use. They have good environment, they have enough materials, enough food, they can enjoy. Of course, they have a lot of space for each individual.

Before I come to America, in our education, we usually think we usually are taught that American people are always abide by law. That's why their country will be this strong. However, when I actually came here and observed I know this is not right. There are not very, they they do not, of course most of people abide by law, but, I don't think that everyone does. Talk about the um independence day the July fourth. That's a vivid example. When I first go, when I first went to see a fire work on July fourth. We went to the park in downtown to watch. After the firework ceremony finished. You can
see a lot of garbage on the ground everywhere. I think their country looks good because they have money. They can hire people to clean up all these garbage within one night. In Taiwan, because we, because of short of budget, our government can not do the thing so efficient. I think that's the difference. It's not that United States have has better quality of population. It's it's the money they have which makes makes difference.

Another difference is their library. Here, every ah, in the United States there are a lot community library which you can borrow video tape, books even CD. Which I don't think we can find this kind of service in Taiwan. I think, I think this kind of service help to increase the quality of people. If possible, if we can learn this aspect of American culture in Taiwan. Then, the Taiwanese people may become mature because of reading.

#2

I don't really like to watch sport game except skating, figure skating. I am not very interesting in basketball. Although sometimes in Taiwan, I only, I will wat, in Taiwan I watched some of the, I watched it sometime when my brother occupied the TV. When I don't have any choice. If I have choice, I will never choose to watch baseball 'chuan-buo' (broadcast in Chinese) broadcast. Um, in United States, the football, especially in at the Ohio state University, the football is a very popular program to watch on TV, especially in weekend. I hate football.
It's not fun at all. It's like so barba-barbaric. It's just like pious piled people, a group of people piled piled up push each other and bump into each other. It's not fun at all. There is, there is no beauty in it and most of all worst of all over the weekend when I have time to watch TV and all these program occupy the schedule on TV. I don't have an other program to watch, so that I have, I have to rent a video tape or something to watch. I really don't have any feeling to football. Plus, whenever there is a football game, the traffic on lane avenue is terrible, which make me hate it more. There is one ball, one kind of ball game that I have I am not really care but if I have to watch I can I can sit on couch and stay which is basebal. Watch baseball ba baseball is is much better than the rest of two mentioned about because the path of baseball is slower and you can you can walk around the house and come back they are still waiting and you can go to prepare for pop corn they are still waiting. It's more relaxing, more enjoyable. Among the all among the sports program, I think I only watch the figure skating if I can um find the schedule of it. I'll never want to miss it but most of the time I don't know the schedule, I just coincidently run into the performance on TV. That is beatiful, but somehow it it makes people nervous whenever they prepare to jump, I will very nervous and afraid of and afraid that they might fall down. But certainly beautiful they co their costum, and their pose, their action is very elegant.
Um, It's a book written by a author called Lien-Chen ah Liang Yien-Chen. Um, in that book the author carfully documented how the idle most of Chinese people worship ah is from. I was so surprised that all the all these idles um we worship is is titled by human beings. We've been worshiped them for more than ten year but we don't we don't know them where where they come from. We don't even know they are not the god. A lot of people are still worshiping all this idles. Ask them for peace for happiness for money for power but they don't have any idea that they are not existing they are just titled by human being. And a lot of, um, a lot of i-idle we worship like Kuan-Kong, he is a human being, he is only a human being in the history. But, somehow, people just admire him and and name him as a god and worship him which is very ridiculous. It makes me think how often that we we never think about what we believe in and and we never research about what we believe. Often we just follow our tradition, follow what our parents do. We never ask why. We never ask the truth behind it. This book, it's um, it's very shocking to me and thinking my parents and all my family are still worshiping all these idle um and and don't believev in Jesus Christ, which makes me worry. They are, my my family are are all very pious budist, but actually Buddhism in Taiwan is not is not pure Buddhism. They combines a lot of stuff. They worship a a lot of different kind of idle not the only Buda. I often remember how how pious my parents are. They spend a lot of money um for temple building and they
donate money to the shrine to the temple. And, on certain day, they will prepare a lot of thing to worship the idle. But think, thinking about all what they do is is in vain, which makes me feel sorry for them, and, I do think I have to somehow find the why find the way and the time to introduce the gospel to them. I hope, I hope they will be blessed like me. And after we die we still can meet each other in heaven.

#4

For Chinese people, we have um lunar new year which is mos um more like American's Christmas eve. It have a um lean lunar calendar um which is different from normal calendar. Um, so the Chinese lunar new year eve is usually on the February of the norm-normal calendar. Um, usually we will, what we will do in the new yea new year eve is at at the lunar new year eve everyone are supose to come back home and be together and just eat a very good dinner. Usually family will cook a lot of dishes, um, even my family, we have to, my mom always have to cook chicken, liver, spinach, salary and .... I think these are most important things because um each of the dishes simblize certain thing. For example, for chicken, if you eat chicken in the lunar new year eve, um, that will simblize that in the future year in the begining of the new year, un your fea, there is a possibility that you can, you can have a good um career, and like a liver, simblize the same thing it's possible for you to get promotion, and, the spinach is simblized a long life,
and salary simblize that um you will become very ..., you will try to save money and become rich. It's very interesting because this kind of custom is getting lost. New generation don't learn this and the custom is getting, um, it's it's vanished. But, I think every each family has has different custom to um has different tradition to follow. Like when I talk to my boy friend, he doesn't, in his family, they never, they never have this kind of um tradition. And, after we after family finish ea eating the dinner, they will usually, um, parents should usually give give children Red Envelope which contains of lot of money, and after that children will usually go out or in their back yard um to play fire cracker which is very dangerous. I hate the sound but some of them are very beautiful. And, a most important thing is in that eve um and the next day new year days we have to wear new clothes, um, which which of course simblize the new begin new begining, hope every thing will start all over aga, I mean will be new. And, my family usually in new year day go to, goes to temple to worship um Buda, of course to ask their protection, their blessing for the following years. And, my mom, my parents are very pious budist, they usually go go to several several temples to worship each different Buda and that's usually the way we spend the new year days. Of course we will go and visit the relative or good friends of my parents. And, as a children, we can receive a lot of Red Envelope from those friends those parents' friends and rela and ah or our relative. Um, that's a good part I like-- Red Envelope. But, when we, when we are, when I were, when I was young, our envelop usually, after new year
day, usually were collected by our parents. So, I didn't really save a lot of money. But, after, I think junior high. I start to have my own saving account and I collect my own money and deposit in the bank. So, after that, um I start to enjoy the Red Envelope. The money not just the feeling of receiving it they not just the excitement I can really use the money I have. That is probably about it.

#5

Among the various types of music. Classic music is my favorite. I don't like Rock music because it's too noisy and sounds violent. I don't like country music because some of them are good but um I think it's too um I don't have any feeling for it. And, I like classic music because it sounds so elegant peace and transform. Human's emotion into music form. So that we can enjoy it and we can feel the spirit of the composer, which is really good. In the history of music there exist various periods of music which reflect different music styles and flavors. Among these periods, I like the Baroque and Romantic music best. Baroque music gives people a sense of order and it sounds so calm and balanced, so, when I am angry or disturbed I would like to listen to the Baroque music because it can calm me down. I also like Romantic music because it's so emotional and so sentimental. You can feel it's like when you listen to the composer's voice their feeling.
their thought. And you can, you can just, your mind is just out of the realistic you can just swim in your imagination and just enjoy, very enjoyable. Among, the composer, Tchaikovsky and Chopin are my favorite, I like Chopin ... 's piano's piece, ah piano piece, pieces. Especially his Nocture, when you listen to his Nocture at night, you'll feel, you'll feel like you are in heaven. Nothing will be better like that. Um, Tchaikovsky, I like his music um because it's so melancholy and I like that kind of sence. And instrument wise um I like the piano pieces, chamber pieces, and vocal pieces. In the piano pieces, I um I like the Mozart's work, and of course Chopin's work and Rochmoninov and Tchaikovsky and Beethoven. I like Mozart's piano pieces because (he) especially the little star variation. His music, he is so talented, his music is like ... It's like he is not human being. He he is angel and his music is come from heaven. It's always so pure, so naive so happy. I often think that if I can, if I can be like Mozart, with short span of life time but contribute a lot, and I think the life will be worth while. I often think, if we can do something important, that's what the life needs. It's not the length of life which is important. It's, it's the contribution of the life which is, which which matters. I like Mozart a lot. And I've already mentioned Chopin. Um, in Rochomoninov's piano pieces, I like I like his um piano concerto number two. I also like Tchaikovsky's piano concerto number one. I think two of them, the feeling of two pieces, of these two pieces are so close. There, they have a feeling of sadness. And, but the second movement of it is so beautiful.
Bethoven's piano concerto number five is also like that. I love his the
Beethoven's s piano concerto the second movement of it the piano cher concerto
number five. And, I also like the vocal music. Ah, which, um, of course I mean,
oper. I like Perchini's opera best, especially the La Boheme Bahimiem. The
song in that oper is so beautiful. That makes you cry. I don't understand what
what they are singing. Um, the, I mean the content of the the song until recently.
But even before I know what what the song means, I love the music. I can imagin
just with, in terms of the music. I can know when when this character must
be happy, when this character must be sad, even though I don't understand the
language. I hope someday I can see the the opera on stage, not just not just from
CD, which must be very enjoyable.

In Buckeye village, you can see so many parents play with their children, which
looks so great. However, I don't really know whether it's worthwhile raising a child.
Of course we know the ch the child is a gift from God. Parents don't have choice
over it. And, in other words, the child is not the property of the parents. From
my own experience of being some other people's child. I don't think being but, I
don't think any beings will enjoy the life in the earth, on the earth. That's makes
me hesitate to have children. I wonder how I will treat my child. I wonder how
my child will treat me. It's takes en, It takes energy and time and money to bring
up child. But, you will never know how your children will turn out in the future. Will he become a gang member? Will he be a scholar? Or, will he do drug? You never know. But, before you can foresee it, you have to pay money for their tuition, for their food. You have to spend your energy on taking care of them. Is it worthwhile? I really doubt it. However, without a child, li, your life may lack of, may lack the sen the sense of fulfillment. A family without a child looks strange. A couple without a child may loosen the bond they have. But, thinking it from other perspective. Will it be worthwhile to have child just to strengthen the bond between husband and wife. My answer is 'No'. I do think, probably, you will be clever if I spend my life to fulfill my goal, and to help my husband, and to enjoy our life instead of wasting our energy on other on a child which we never know what he is going to turn out later. Of course, I know I am too extremes. This may be wrong. And, I may change. My thought will be changed next moment. Actually, every moment I think in different way. When I saw other parents play with their children, and when the children, when their children are cute. I really considering to have children. But, when I saw some naughty boy with no respect. I will give it a second thought. You never know what the future will become. Any way, I don't really care.
Uh, let's talk about the basic concept about Marketing. Marketing is some kind of process. They, um, th-th-the process will satisfy the consumer, also the the the se-seller as well. So, in this process, there are some essential elements included. The first is 'need', uh, human need. There are several level of need of human being. There is, there-there is, there-there are uh, uh, human need food, the physical satisfaction, and, some kind like uh psychological satisfaction, and .... uh there-there-there is Meslow uh demand model described some more detail about that. But the the seller can not create need, they only can uh create demand. What what is the difference about demand and need? Need is the is some kind of want or desire of the human being. But demand is the the need the want uh with the pur-purchase potential, means uh demand. If you have no money your need is nothing to the to the seller. If you have money, your need means something. So, there is a a little a-a-a-s-a-s-a-s a short story said there- there is a there are there are two sale per sales persons they they are assigned to to run bini-business in in A-Africa or some some some where. Un, one of the sale person thinks it's very good because everyone has no shoes to wear. But the other uh sale uh person thinks that's too bad because no one want to no one needs shoes. But, actually the key point depends on whether they, whether the the people over there have money or not. If they have money, it's a good thing.
If they have no money it's really a bad thing. And, OK, let's come back to the Marketing. There is need and the need with money become demand and they, what do they demand? They demand some products to satisfy their demand and their need. So, the s the buyer, the consumer they they provide the need and the demand. The seller they provide product. The products um can be a physical good or intangible uh service. So, there there is another name for for the products. You can, you can call it a satisfactor, satisfier, ya. Ok, so there is a product and demands. Uh, but there must be an exchange process between these two things. So, exchange is a very important ah element in the in the process. And everything (I don't know) there is still a basic element (the) it is market. Every business, every exchange, trade, every thing happen it's happened in the market. Ok, so need, demand, product, seller, buyer, exchange, market, as, ah, the seven basic elements for the the concept of Marketing.

#2

I like music very much. When I was a boy. When I was about nine years old. I remember the day when I saw a tape audio tape on the desk of my brother my elder brother's. I didn't know what what is this. At that time, I really didn't know. I just feel it's very cute. And, in, I have no chance to to listen to music in my in my home. I can only hear music from TV. But, I think that's all some some theme song in the cartoon program. I like to listen to country music when I was
teenager. And, I like to listen to rock-n-roll and soft rock and love song when I was in college. When I getting older. Ah, when I was an graduate student, I start to listen to some soft music. And, the last year, when I was in the graduate school, for my Ph ah my master degree. I start to listen to classic music. And since that time, I love classic music very very much. That is interesting, when, before that time, every time if I hear some voice about classic music from the radio. I will change the channel as soon as possible. So, it's very in-interesting. When I getting old I, getting older I..., I start to listen to classic music and love it very so much. I start to buy compact disk because I think classical music is worth to be stored to be keep in in such a a permanent signal keeper. Maybe, when I getting older I I became richer to afford compact disk and and CD player. So I, I bought my first portable CD player because I like to listen to classic music. So, I I bought my first CD play ah portable CD player after I think after two years classical music listening. But I I still don't know very much about the composer or or the different kind of classic music. I just know there are some different age in the history, music age... OK.

#3

OK, let's ah let's talk about the power amplifier. So, when you decide what kind of ah speaker you want to you want to use. And then, you can decide what kind of power amplifier. At firstm, you have to make sure how powerful you need. The the different kind of design between ah high power output amplifier and low power amplifier.
power amplifier. But, there there there are two very different design about the,
about the power amplifier. One is so called tube, vacuum tube amplifier and the
other is the solid state power amplifier. Ah, some audiophile they they love the s
the sound come from a vacuum tube amplifier. Um, I I think I am I am one of them.
Because we we think the the the sound made by the the power amp the the the
tube amplifier is more warm, is warmer, sweeter, and softer and and maybe better.
But, usually the, if you want to have the same level of the output power, you have
to pay more money for a tube amplifier. Um, most of the classical music lover
they will prefer ah tube amplifier because they, the the tube amplifier provide a a a
better high and middle range of the sound. But the the solid state power amplifier
they provide a more powerful, high current output. So, most of the rock-and-roll
lover or or even the ah heavy metal lover, they should love solid state power
amplifier than the tube amplifier. And... OK, let's talk about the pre amplifier....

#4

I think I am a modern people. And, I think I am a educated people, a educated
person. So, I think I have to know some thing about arts even though I don't think
I know a lot about arts. I think arts include music, painting, architecture, and ... any
kind of artificial creature, creation. Actually, nowadays the business also create
a lot of product with the concept of art. The building need not only structure but
also a arts like ah appearance, and design, interior design. And, arts seems the
thing related to rich people. And the art producer related to poor people. But someone who got little arts talent but with more business talent, they will become a famous artist, today. But someone who got a lot of arts talent but have no business idea, he will be a very very poor person. So, sometimes I think arts just like the invisible clothes of the King. I wonder how many people can really appreciate an art article. They spend lots of money for arts product or articles because they really appreciate the art or they just do some kind of investment. So, I think not really many people know arts. But they have to pretend they like arts, just as me. But the most important thing I think the modern people should have taste and ability to appreciate arts. OK!

#5

I know, I almost know nothing about the computer ah... about five years ago. Ah, at that time, I just can play some game, some very simple game, like playing cards or or Chinese chess, that kind of game pro-program in the in the computer. And, I now I think I know more about computer compare with the days when I ah when five years ago. I know there is ah, the CPU seems a very important thing, just like brain of human being in a computer motherboard. The history of the computer development seems just the history of the CPU. I think no more than ten years ago there was a there were only two six-ty six, two eighty six, and then three eighty six, and then four eighty six, and now the-there are a lot of Pentium
CPU. And, I think the second important thing in the about computer is the memory. The CPU needs memory to process information or data or said data. Especially, ah, process the the picture or the geography information, they need more memory about the the ram. My computer is Pentium 90. I bought it two years ago before I came to United State. At that time, Pentium 90 is a very advanced model. But now, I s I heard some model already developed in two hundred or two hundred two two twenty Hz mega bite Hz. Pentium two two two twenty or something like that. So, Pentium 90 seems just normal model. And I believe one years later or two years later, my computer already out of date at that time.

I use computer mostly for words process. So I use 'Word' the ah one ah it's a pac-package program of, designed by the Microsoft. I I use 'Word' six point, six point zero. Ac-actually, I use Homenet and Netscape more o-often than the Word because I enjoy so much ah in the internet through ah by the Netscape software. Un... There is Window three point one edition in my installed in my computer. And I know most of the people here they use nine ah Window Window ninety five already. I I know Window ninety five is designed more friendly than the Window three point one. But when I bought this computer, at that time, there there there were still so many bugs in the Window ninety five, especially ah in Chinese ah edition. So I I just ah ask ah the the computer shop to install Window nine ah three point one. I think I will use Window ninety
five very soon, because I I think if I I if I still use Window three point one, it seems
ah... I am out of date if I still use Window three point one.

#6

I have been South Africa for one year. Almost one year. Uh, I have been
there in 1991. And I went there because I got a scholarship from the government
of South Africa. Uh. The purpose of the bursary is for some special study uh
concerning South Africa. And, uh I was assign to be... I I was assigned to stay in
the University of Pretoria. That's really a good, very good University. That
actually is not a universal University. or said international University. Because
uh the language use used in the campus is Afrikaans. So so actually, the
University is established for the Afrikaners. And I was the few, I I was the, some
of the, very few, uh, foreign students over there. Um, I was major in Marketing
Management. I I have a I had a a very good advisor. And I stayed in the
dormitory with the undergraduate students. And I really had a good time over
there. Um, 1991 is a very special year for South Africa. Um, the Apartheid was
um officially um I don't know the term stopped in 1991. So I am I was I am so
lucky to to be there in that critical year. Um, There was a very serious race
problem political problem in South Africa. I I believe they got a bad international
population, um, international image or ..., ya, something like that, Reputation, ya
international re-reputation. And, I studied very hard over there during the year in
in that year. But I still have been some places out of Pretoria. I have been Johannesburg. Uh, it is a commerce commercial s uh city just oh, located beside the Pretoria about uh half half hour driving. And Pretoria is a is the capital of the South Africa. The Union Building -- office of the President is located in the Pretoria. And I've been Durban. It's in the ... south east of the South Africa. It's a very the- the- there is a a beautiful beach over there. Un, it's a very good site s um site seeing spot. And I have been Kroger National Park. It's a very famous National Park. It it is located in the north east of South Africa. Um, I saw some lions over there and impalas and ... And I, um ya, I I had a good time. And I had been some private game reserves. Um, there is some, there are some elephants any kind of animal. Um, ya, I I miss the days when I was there. Um, and I had some Taiwanese friends over there. Uh, most of them are diplomatic uh of-officers over there. And I was a chair person in the uh Chinese Student Association.... Um, OK, I think that's all.
REFERENCE


