

INVESTIGATION OF L1 INFLUENCE ON AVOIDANCE OF RELATIVE CLAUSES
BY JAPANESE LEARNERS OF ENGLISH: DO THE LEARNERS TRANSFER THE
USE OF JAPANESE RELATIVE CLAUSES INTO ENGLISH?

by

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TABLE OF CONTENTS

List of Tables.....	v
List of Figures.....	vi
Chapter One: Introduction	1
Chapter Two: Literature Review.....	6
Avoidance as a Response to Difficulty	8
Alternative Explanation for Underproduction	
– Studies of Chinese Learners.....	13
Studies for the Frequency of Japanese Relative Clauses	17
A Contrastive Analysis of Japanese and English Relative Clauses	20
Frequency and Discourse Functions of Relative Clauses and Avoidance	31
Japanese Relative Clauses and English Adjectives/Noun Modifications	33
Research Questions.....	36
Chapter Three: Methods	39
Participants.....	40
Research Design.....	41
Materials	44
Chapter Four: Results and Discussion	54

Results.....	55
Discussion of Results.....	75
Chapter Five: Conclusion	90
Findings of this Study	91
Limitations and Further Study	94
Implications.....	96
References.....	100
Appendix A: Consent Letter	104
Appendix B: Consent Letter (English Translation)	106
Appendix C: Translation Test	108
Appendix D: Translation Test (English Translation)	109
Appendix E: Sentence Combination Test	112
Appendix F: Sentence Combination Test (English Translation).....	114
Appendix G: Vocabulary Knowledge Scale.....	116
Appendix H: Vocabulary Knowledge Scale (English Translation).....	122
Appendix I: Frequency of Translation Strategies by Participants	128
Appendix J: Frequency of Translation Strategies by Sentences	129
Appendix K: Scores on the Sentence Combination Test	130
Appendix L: VKS Scores by Participants.....	131
Appendix M: VKS Scores by Words	132

LIST OF TABLES

Table 1	Distribution of Relative Clause Counterparts in Love, Madman, and Demian.....	27
Table 2	Universal Adjective Types	34
Table 3	Japanese Relative Clauses Expressing Property Concepts	35
Table 4	Adjectives Corresponding to Japanese Relative Clauses.....	45
Table 5	Frequency of Occurrence of the Adjectives Used in the Study	46
Table 6	Frequency of Translation Strategies.....	56
Table 7	Scores of Sentence Combination Test.....	60
Table 8	VKS Scores by Participants	61
Table 9	VKS Scores by Words.....	61
Table 10	Reasons for Using Adjectives	64
Table 11	Reasons for Using Relative Clauses.....	68
Table 12	Reasons for Using Other Structures	71
Table 13	Average Scores on Sentence Combination Test versus Frequency of Translation Strategies.....	80
Table 14	Translation Strategies versus Average Scores on VKS by Words.....	82
Table 15	Translation Strategies for Four Japanese Relative Clauses.....	85

CHAPTER ONE: INTRODUCTION

“When I don’t know whether a noun is countable or not, I just use ‘a lot of’ or ‘lots of’ to modify it. I don’t use either ‘many’ or ‘much’ in such situation.” Li quotes the comment by a Chinese learner of English (1996, 172). Kamimoto, Shimura, and Kellerman (1992) offer another remark of a second language (L2) speaker:

I never know which Dutch nouns have common or neuter gender, so I always stick a diminutive suffix on the end of them, because then they’re always neuter, bless the little things (British university professor after 25 years in the Netherlands). (1992, 251)

The above quotations illustrate L2 learners’ behavior when they face difficulty communicating in the L2. The learners are aware that there is a need to use a word or structure in the L2 but they cannot reach the target. Consequently, they choose not to use it but use some other linguistic means that they can use without errors. This behavior is called avoidance, which is “one of the strategies learners may resort to in order to overcome a communicative difficulty” (Laufer and Eliasson, 1993, 36).

I first became interested in the avoidance phenomenon when I encountered the study by Schachter (1974), which first reported avoidance in L2 learning. Her study is famous in the field of second language acquisition (SLA) research and is cited in many books for language teachers. Her study drew attention because not only did she first empirically document the avoidance phenomenon but also she criticized the error

analysis approach in the article.

However, what drew my attention to her study was that one of her subject groups was Japanese English-as-a-second-language (ESL) students and that as a native speaker of Japanese as well as a former English-as-a-foreign-language (EFL) learner I could not agree with her proposal. Schachter claimed that Chinese and Japanese ESL students avoided using a relative clause (RC) in their writing because the construction in English is so different from that of their first language (L1) that they chose not to try it. That is, in Schachter's theory, language differences lead to difficulty and the difficulty causes avoidance. Although her claim seemed to be accepted, I never thought I had avoided using English RCs because the structure was difficult to learn. On the other hand, it is likely that students who do not have enough knowledge of grammar rules regarding the RCs will hesitate about using them because they may not have confidence. However, I wondered whether it felt difficult for them just because the structure in English is very different from that of Japanese. I wanted to know more about Schachter's study and what other researchers had to say about her study. My interest and questions on avoidance of English RCs by Japanese learners grew into a capstone topic. Below I will explain briefly how my investigation of the literature on avoidance generated the research questions in my study.

Since the first work by Schachter (1974), avoidance has been studied by many researchers. These studies are roughly divided into two categories: those that support Schachter's notion of avoidance, that is, avoidance is caused by the learning difficulty of a structural or semantic aspect of a target language (Kleinmann, 1997; 1978; Chiang,

1980; Dagut and Laufer, 1985; Hulstijn and Marchena, 1989; Seliger, 1989; Laufer and Eliasson, 1993; Liao and Fukuya, 2004), and those that argue that avoidance is really a form of underproduction caused by transfer of the frequency, distribution, and function patterns from the L1 (Bley-Vroman and Houg, 1988; Zhao, 1989; Kamimoto et al., 1992; Li, 1996).

Among the latter studies, the researchers who investigated avoidance on Chinese learners of English (Bley-Vroman and Houg, 1988; Zhao, 1989; Li, 1996) challenged Schachter's proposal and claimed that underproduction of English RCs by Chinese learners did not necessarily mean avoidance caused by difficulty. Bley-Vroman and Houg proposed that the low production rate of English RCs by the Chinese learners would be a reflection of the low frequency of RCs in Chinese, and suggested that the conclusion would apply to the Japanese learners in Schachter's study.

Kamimoto et al. (1992) examined the RC frequency in English texts and their Japanese translations to test the findings of Bley-Vroman and Houg in Japanese. However, contrary to Bley-Vroman and Houg's speculation, Kamimoto et al. found more RCs in Japanese than in English. Based on the results, they concluded that there was no evidence to dispute Schachter's claim that learning difficulty induced by the structural differences led to avoidance on English RCs by Japanese ESL students. On the other hand, they questioned why there were a large number of RCs in English as well as in Japanese which did not have RC counterparts in the other language.

Collier-Sanuki (1993) addressed the issue raised by Kamimoto et al. (1992) in her detailed contrastive study on form, distribution, and function of RCs between English and

Japanese. Her discourse analysis revealed that generally RCs were used about 1.5 times more frequently in Japanese than in English and that the use of RCs in English and Japanese often did not correspond. She offered explanations for these usage differences between the two languages and suggested that the differences in RC frequency are due to the different discourse functions and mechanisms that RCs have in the two languages. Furthermore, she revealed that many Japanese RCs were rendered into English as adjectives. She reasoned that RCs and adjectives belong to the same category in Japanese and RCs compensate for a lack of adjectives in Japanese. Then, do Japanese ESL learners use adjectives in English to realize the function/meaning of Japanese RCs? Or do they transfer RC construction strategies into English and produce RCs? Considering Kamimoto et al. (1992) pointed out that the low production rate of English RCs by Japanese ESL students in Schachter's study cannot be a reflection of the frequency of Japanese RCs, it is important to know how the relatively high frequency of Japanese RCs affects the interlanguage of Japanese ESL learners.

The following two research questions were determined: 1. Do Japanese learners of English transfer the use of RCs in Japanese into English? That is, which strategies do they use in English, adjectives, RCs, or other structures, to express the function/meaning of Japanese RCs? 2. How is the transfer influenced by the learners' command of RCs in English as well as the amount of learners' knowledge of adjectives in English that express the concept conveyed by Japanese RCs? In order to answer these questions, three written tests and a stimulated recall interview were designed and given to adult Japanese learners of English. The results of the written tests were integrated with the information gained

from the interview to discuss how the frequency and function of Japanese RCs affect the production of RCs in English.

By documenting reasons for learners' linguistic choices, this study will reveal whether the relatively high frequency of Japanese RCs would influence RC production in English by the Japanese learners. In doing so, this study will contribute to the study on avoidance of English RCs by Japanese learners. This study will also tell us how the functional correspondence between Japanese RCs and English adjectives appears in writing by the Japanese learners and will provide useful information for ESL educators about the problems that the Japanese learners might have in acquiring the use of adjectives in English.

In Chapter 2, the Literature Review, the studies on avoidance are reviewed with regard to the explanation the researchers gave as the cause of avoidance. The contrastive study on RCs in English and Japanese by Collier-Sanuki (1993) is introduced as the basis of the present study. In Chapter 3, the Methods, criteria of participants as well as a description of the participants are given, the design of this study is outlined, and materials used for data collection are explained. In Chapter 4, the Results and Discussion, the results of the three tests and the interview are presented and analyzed to provide answers to the research questions. Chapter 5, the Conclusion, summarizes the findings in this study, explains limitations of this study, and makes suggestions for further study. It also discusses implications this study has for second language instruction.

CHAPTER TWO: LITERATURE REVIEW

In the previous chapter I overviewed the topic of avoidance in the second language acquisition (SLA) research and introduced the purpose of my research. In this chapter, I will discuss previous studies on avoidance and introduce the contrastive study on RCs between English and Japanese by Collier-Sanuki (1993) as the basis of the current study. Then, I will synthesize the findings in the previous studies and propose the research questions for my study.

In the first section, I will review the studies that support Schachter's notion of avoidance, that is, avoidance is caused by the learning difficulty of structural or semantic aspects of a target language (Kleinmann, 1997; 1978; Chiang, 1980; Dagut & Laufer, 1985; Hulstijn & Marchena, 1989; Seliger, 1989; Laufer & Eliasson, 1993; Liao & Fukuya, 2004). In the second section, I will look at the three studies that challenge Schachter's proposal and argue that avoidance of English RCs by Chinese ESL learners is really a form of underproduction caused by transfer of the frequency and discourse functions from the L1 (Bley-Vroman & Hounig, 1988; Zhao, 1989; Li, 1996). In the third section, I will discuss Kamimoto et al. (1992), who review previous studies and compare the frequency of English and Japanese RCs. In the fourth section, I introduce a study by Collier-Sanuki (1993), who mentions an alternate explanation of avoidance in her detailed contrastive study on discourse functions in English and Japanese RCs. In the

fifth section, I will discuss how the findings of previous studies lead to the investigation in the present study. In the last section, as the basis of this study, one of the findings of Collier-Sanuki (1993), the function of Japanese RCs and their equivalents in English, that is, adjectives and noun modifications, is discussed in detail. Finally, I will present the research questions of my study.

Before reviewing previous studies, I will briefly discuss the definition of RCs as well as avoidance. First, I will explain the construction of RCs in English. A RC is a type of complex postnominal adjectival clause which uses relative pronouns, such as *who*, *whom*, *which*, *that*, and *whose*, to connect a dependent clause and an independent clause. There are two types of RCs, restrictive RCs and nonrestrictive RCs, as the following examples show:

The woman who lives next door is a Girl Scout troop leader.

Mrs. Jensen, who lives next door, is a Girl Scout troop leader.

In the first sentence, a restrictive RC, *who lives next door*, restricts or identifies the meaning of the head noun phrase (NP), *the woman*, it modifies. In restrictive RCs, a relative pronoun is optional except when it functions as subject as in the example. On the other hand, in the second sentence, a nonrestrictive RC supplies only additional information and does not restrict the meaning of the head NP. In nonrestrictive RCs, relative pronouns are obligatory and *that* cannot be used (Celce-Murcia and Larsen-Freeman, 1999).

Next, I will define the concept of avoidance. Avoidance is treated and defined in two ways in different areas of SLA study. Avoidance can be classified as one of the

communication strategies that are seen as “attempts to bridge the gap between the linguistic knowledge of the second-language learner and the linguistic knowledge of the target language interlocutor in real communication situations” (Tarone, 1981, 288).

Communication strategies such as paraphrase and mime may be used to “bridge the gap”.

On the other hand, avoidance may be employed when the gap seems to be “unbridgeable” (288). There are several types of avoidance: syntactic and lexical avoidance, phonological avoidance, topic avoidance, and message abandonment (Brown, 1994). On the other hand, according to Ellis (1994), avoidance has been seen as one of the manifestations of language transfer. Manifestations other than avoidance include errors (negative transfer), facilitation (positive transfer), and over-use. Ellis defines avoidance as follows:

Avoidance is said to take place when specific target-language features are under-represented in the learner’s production in comparison to native-speaker production. Learners are likely to avoid structures they find difficult as a result of differences between their native language and the target language. (1994, 693)

Despite the investigation of many researchers, as we will see later, there are many unanswered questions in avoidance research, and the causes of avoidance have to be investigated further. Even identifying avoidance has been problematic. I will discuss these issues through reviewing previous studies.

Avoidance as a Response to Difficulty

In this section, I will review the study by Schachter (1974) as well as other studies that support Schachter’s view of avoidance, that is, avoidance would be caused by the learning difficulty of a structural or semantic aspect of a target language. Among these

studies, Kleinmann (1977, 1978) and Chiang (1980) followed up Schachter's study and refined it. Dagut and Laufer (1985), Hulstijn and Marchena (1989), Laufer and Eliasson (1993), and Liao and Fukuya (2004) expanded Schachter's notion of avoidance by looking at possible causes of difficulty not only in structural differences between L1 and L2, but in the semantic complexity of a target feature. Seliger (1989) pointed out problems in previous studies and proposed "true avoidance" (21). Reviewing these studies will reveal issues in the study of avoidance.

The phenomenon of avoidance was first demonstrated by Schachter (1974). She examined compositions of Persian, Arabic, Chinese, and Japanese ESL students in order to study RC production in English. She found that the error rate of Chinese and Japanese students was significantly lower than that of Persian and Arabic students, which could indicate that RCs in English would not cause many problems for the Chinese and Japanese students. However, she also found that the Chinese and Japanese students produced notably fewer RCs than the Persian and Arabic students, who produced as many RCs as the native English speaking American control group. Based on the prediction provided by contrastive analysis (CA), Schachter inferred that the structural difference between Chinese/Japanese RCs and English RCs caused difficulty for the students, but that the difficulty did not lead to the errors but rather to fewer numbers of RCs produced by the students. In Chinese and Japanese a RC precedes its head noun phrase (NP) while in Persian and Arabic a RC follows its head NP as in English. She concluded that Chinese and Japanese students tried to avoid using English RCs or used them only when they were sure that they were correct. Schachter's work is important because it is the first

study that documents empirically the existence of avoidance as a response to difficulty. However, her study had a number of problems. As Kamimoto et al. (1992) pointed out, we cannot tell the textual density of RCs in a free composition task. Moreover, there was no proof that the students had knowledge of the RC construction in English. Therefore, the Chinese and Japanese students in Schachter's study might not have known the rules for producing English RCs.

Kleinmann (1977, 1978) pointed out that "to be able to avoid some linguistic feature presupposes being able to choose not to avoid it, i.e., to use it" (1977, 96). He demonstrated the learner's knowledge through comprehension tests before he examined ESL learners' avoidance behavior in accordance with the CA difficulty prediction. The results supported Schachter's proposal that CA can predict avoidance. However, there is an interaction between linguistic and psychological factors. The affective state of the learners, such as degree of anxiety in using English, degree of confidence in correctness, and motives for success and avoiding failure, could determine the occurrence of avoidance (1977, 106).

Using Chinese, Japanese, Arabic, Persian, and Spanish learners of English, and native English speakers, Chiang (1980) followed up Schachter's study by examining three variables as predictors of RC production: language background, overall target language proficiency, and input question types. Chiang concluded that "the best predictor is overall language proficiency [followed by language background], but even this predictor accounted for only about 10 % of the variance" (144). It seems that none of the variables were a good predictor of avoidance.

The next four studies examine the avoidance of phrasal verbs as a response to difficulty. They differ from the previous three studies in that they looked at the possible causes of difficulty not only in structural differences between L1 and L2 but also in the semantic nature of phrasal verbs. Dagut and Laufer (1985) found that Hebrew learners of English, whose L1 lacks phrasal verbs, preferred one-word verbs and avoided phrasal verbs. They claimed that only interlingual factors, that is, the structural differences between L1 and L2 could explain the learners' difficulty, and intralingual factors such as overgeneralization or fossilization could not. However, Hulstijn and Marchena (1989) reported that structural differences might not be the only reason for avoidance since their subjects, Dutch learners of English, whose L1 has phrasal verbs, avoided some of the idiomatic (i.e., figurative) phrasal verbs that had a literal counterpart in Dutch. They suggested that avoidance would arise from not only the L1 – L2 difference but also L1 –L2 similarity. However, Laufer and Eliasson (1993) found that Swedish learners of English, whose L1 has phrasal verbs, did not avoid idiomatic phrasal verbs that were identical in Swedish and English. They argue that idiomatic similarity between L1 and L2 does not necessarily lead to avoidance. They also argue that inherent complexity of L2 form does not play the major role in avoidance, either, since the Swedish learners did not avoid figurative phrasal verbs. By comparing their results with the previous two studies, Laufer and Eliasson (1993) concluded that the best predictor of avoidance was L1 – L2 difference. Liao and Fukuya (2004), whose subjects were intermediate and advanced Chinese learners of English, speculate that the structural differences between the L1 and L2 (Chinese lacks phrasal verbs) as well as semantic complexity of the phrasal verbs may

be the reasons of avoidance since the intermediate learners avoided phrasal verbs, particularly the figurative ones, while the advanced learners did not avoid either figurative or literal ones. In addition, their analysis together with the previous three studies suggests that there would be a developmental stage from avoidance to nonavoidance regardless of whether learners' L1 has phrasal verbs or not.

Seliger (1989) questions the definition of avoidance in previous studies and points out two problems: (1) it is very difficult to distinguish avoidance from ignorance or incomplete learning, that is, presystematic use of a language form, and (2) in order to claim avoidance, a statistical norm of native speaker usage should be demonstrated. He proposes that "true avoidance" (21) occurs when learners can form the target structure, but have not yet acquired contextual or distributional rules of the form. Seliger found that the Hebrew learners of English avoided passive in English not because of the complexity of the form but because "they do not use it in their own language and they apparently transfer this preference for the active over to English" (32). Seliger defines this phenomenon as "true avoidance." However, Kamimoto et al. (1992) argue that "On the face of it, this does not look like avoidance at all. Israelis are simply transferring the distribution of the passive from Hebrew to English" (261). As Kamimoto et al. point out, "true avoidance" does not seem to be avoidance since the Hebrew learners do not know the context where the passive is usually used in English. The learners cannot avoid an aspect of English they do not know.

By reviewing previous studies on avoidance, we can see that there is still a problem in the definition of avoidance. If avoidance presupposes the knowledge of the target

feature, we should be able to tell what sort of knowledge and how much of it is needed as the first step to identify avoidance (Kamimoto et al., 1992). Otherwise distinguishing avoidance from nonuse of a form caused by incomplete learning or ignorance is very difficult as Seliger (1989) states. In addition to the need for clarifying the definition, the possible causes of avoidance should be investigated further. Schachter (1974) claims that a structural difference between L1 and L2 leads to avoidance. However, the studies after Schachter found that avoidance could be caused not only by L1 – L2 difference, but by L1 – L2 similarity or inherent L2 complexity. The most recent research (Liao & Fukuya, 2004) claims that learners go through a developmental stage from avoidance to nonavoidance as their proficiency reaches a higher level.

I have discussed the studies that support Schachter's notion of avoidance, that is, avoidance is caused by the learning difficulty of structural and semantic aspects of a target language. On the other hand, some researchers have argued that the underproduction of certain linguistic features does not necessarily suggest avoidance and proposed an alternative explanation for underproduction.

Alternative Explanation for Underproduction – Studies of Chinese Learners

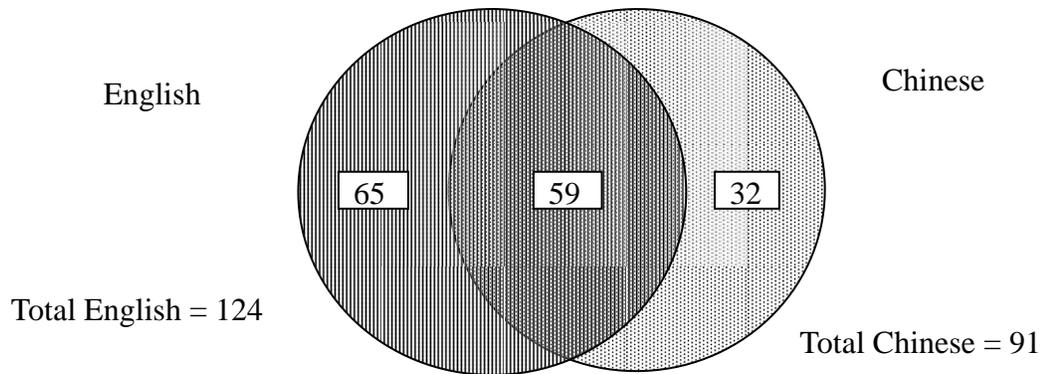
In this section, I will introduce studies that challenge Schachter's proposal and argue that underproduction of RCs by Chinese learners of English does not always mean avoidance.

Bley-Vroman and Hounig (1988) suggested that the low production rate of RCs by Chinese ESL students in Schachter's study might not be avoidance caused by difficulty,

but a reflection of the low rate of RC use in Chinese. In order to test their hypothesis, they compared RC frequency in Chinese and English. They counted the number of restrictive and non-restrictive RCs¹ in the first five chapters of an English novel, *The Great Gatsby*, and corresponding RCs in its Chinese translation. There were 93 RCs in the English original. Of these, only 32, one-third, were translated as RCs in the Chinese version. On the basis of the results, Bley-Vroman and Houg proposed that low frequency of RCs in Chinese could lead directly to low frequency in interlanguage. Moreover, they suggested that their conclusion could apply to the Japanese ESL students in Schachter's study. However, Kamimoto et al. (1992) as well as Collier-Sanuki (1993) point out that Bley-Vroman and Houg's result of RC counting cannot support their hypothesis since they did not count all RCs but only those that occurred in the English original. Their analysis cannot prove that RCs occur less frequently in Chinese than in English.

Zhao (1989) resolves the problem of Bley-Vroman and Houg's study by counting all the RCs in a Chinese translation of a book originally written in English. The results are schematized in Figure 1 below. Zhao found 124 English RCs and 91 Chinese RCs; about one half of the English RCs (65/124) and one-third of the Chinese RCs (32/91) do not have counterparts in the other language.

¹ According to Kamimoto et al. (1992), Bley-Vroman and Houg counted restrictive and nonrestrictive RCs, but did not include those RCs that did not have relative pronouns or adverbs. Their counting method may have reduced the number of restrictive RCs in their study.



(summary of data in Zhao, 1989)

Figure 1: Number of Relative Clauses Used in English Text and Their Chinese Translation

Zhao also conducted a comparative analysis of the semantics and discourse functions of RCs in the two languages. According to Zhao, Chinese RCs have only one function, restricting the referent of the head noun; therefore, English RCs that serve to provide other functions, such as emphasizing the head noun or providing additional information, are not realized as RCs in Chinese. Consequently, the Chinese language uses syntactic constructions other than RCs to perform the functions provided by RCs in English. Zhao concluded that the “Chinese discourse makes less use of RCs than English and the distributions of RCs in the two languages are different” (116). On the basis of these findings, Zhao claimed that the low production rate of English RCs by Chinese ESL learners in Schachter’s study would not be a case of avoidance but of transfer of the construction strategies of Chinese into English, that is, transfer on the discourse level.

Li (1996) followed up Zhao’s study and tested whether intermediate to advanced

Chinese learners of English consciously avoid English RCs or “subconsciously underproduce” the structure. The term “subconscious underproduction” applies “when L2 learners who share the same L1 underproduce certain structures in the L2 without realizing that they are doing so” (173).

First, Li compared the number of RCs in newspapers and bulletins in English and Chinese. He found fewer RCs in Chinese than in English: approximately 10 English restrictive RCs and about 8 Chinese RCs in every 1000 words. Second, Li interviewed the Chinese learners and discovered that all but one participant said they had never consciously avoided using English RCs in writing because they felt RCs were difficult. Third, Li gave participants two written tests and an interview after the first test. The first test, which examined participants’ knowledge of English RCs, and the following interview revealed that even though the participants were not able to produce 43 % of the possible RCs, they did not consciously try to avoid RCs because of difficulty in constructing them. In the second test, translation questions from Chinese to English, Li included sentences adapted from Zhao’s examples of English RCs that do not have Chinese counterparts. Although participants were asked to translate into English using RCs, many of them were not able to produce English RCs that do not have Chinese equivalents.

On the basis of these results, Li concluded that the structural differences between English and Chinese RCs do not cause much difficulty for Chinese intermediate to advanced learners in producing English RCs. However, RCs that have special pragmatic functions in English are unlikely to be used in English writing by Chinese learners

because they use non-RC structures in Chinese for those functions. Li claims that Chinese learners' underproduction of English RCs is not conscious avoidance, but subconscious underproduction caused by the pragmatic difference between L1 and L2, which is too subtle to be noticed by the learners.

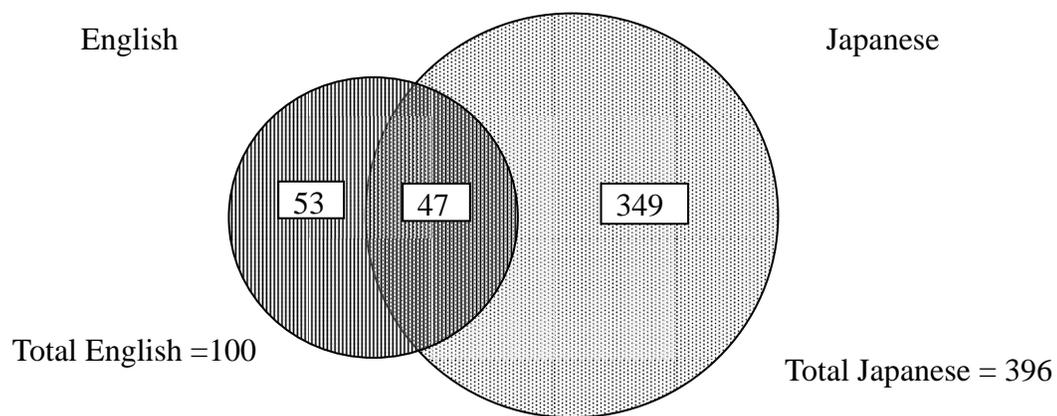
The studies discussed in this section argue that the low production rate of English RCs by Chinese ESL learners would result from transfer of the low frequency of RCs in Chinese into English or transfer of construction strategies of Chinese into English. Among them, Bley-Vroman and Houg suggested that their conclusion would also apply to Japanese ESL learners. In the next section, I will introduce Kamimoto, Shimura, and Kellerman (1992), whose studies examined Bley-Vroman and Houg's speculation.

Studies for the Frequency of Japanese RCs

Kamimoto, Shimura, and Kellerman (1992) reviewed Schachter's work as well as other studies on avoidance and questioned the concept of avoidance which looks at RCs from purely a structural point of view. They claimed that in order to propose that avoidance was an explanation of underproduction, it was necessary to examine the form, distribution, and function of the features in L1 which were allegedly avoided in L2, and be able to identify what sort of knowledge of the features and how much of it learners must have.

They compared the frequency of RCs in English and Japanese to test the findings of Bley-Vroman and Houg (1988). They used the same novel as Bley-Vroman and Houg used, *The Great Gatsby*, in original English and its three Japanese translations.

First, they counted the number of English RCs in the original text and corresponding RCs in the three Japanese translations in the first two chapters. They found that about half of English RCs are not translated as RCs in the Japanese versions. However, when they counted all the RCs, in one of the three translations, including those that do not appear as RCs in the English original, they found a very different result. The result is schematized in Figure 2 below.



(summary of data in Kamimoto et al., 1992)

Figure 2: Number of Relative Clauses Used in *The Great Gatsby*

There were about four times as many RCs in Japanese as in the original (396 / 100). Of these, 349 have no English counterparts in the original text. Only about one half (47 / 100) of English RCs have equivalents in Japanese. They also counted RCs in four other sources and found roughly equal number of RCs in the English and Japanese texts. Based on the result that RCs are used in Japanese at least as frequently as in English, they concluded that “there is no reason to suspect that Schachter’s inference that Japanese

students were avoiding RCs in English is incorrect” (267). They pointed out that low frequency of RCs in Chinese itself may explain the low production rate of English RCs by Chinese students in Schachter’s study, but the same explanation cannot be applied to the underproduction of English RCs by Japanese ESL students in the same study. However, they questioned why there were a large number of RCs in English as well as in Japanese texts which do not have counterparts in the other language.

While Kamimoto et al. (1992) support Schachter’s conclusion, Collier-Sanuki (1993) mentions a different interpretation of the data by Shimura (1990, as cited in Collier-Sanuki, 1993),² which compares the frequency of RCs in *The Great Gatsby* in the English original and its Japanese translation and presents results similar to those of Kamimoto et al. Collier-Sanuki points out that the fact that many English RCs are not translated into Japanese as RCs may indicate that Japanese does not have some types of RCs or Japanese uses other ways of expressing the concept conveyed by English RCs. She suggests that this difference in RC use in English and Japanese may appear as underproduction of English RCs by Japanese ESL learners since the learners may not be used to the function of some types of English RCs.

Kamimoto et al. (1992) argue that in order to propose avoidance as a reason of underproduction, one should examine not only the form, but also the distribution and

² Shimura (1990, as cited in Collier-Sanuki, 1993) counted the number of RCs used in the first two chapters of *The Great Gatsby*, in the English original and its Japanese translation. He found 100 RCs in English, and of these, 47 were translated as RCs in Japanese. These numbers are the same as the ones in Kamimoto et al. (1992). However, in a Japanese translation, Shimura found 337 RCs whereas Kamimoto et al. reported 397 RCs. I was not able to identify the reasons for this discrepancy in the number of Japanese RCs.

function of the features in L1 that are considered to be avoided. In their study, they compared frequency of RC use in English and Japanese, but did not examine distribution or function of RCs in the two languages. Collier-Sanuki (1993) conducted a contrastive study of the frequency, distribution, and function of RCs between English and Japanese and suggested an alternate explanation of avoidance as I mentioned above. In the next section, I will present the study by Collier-Sanuki to gain information about the RC use in English and Japanese and to investigate possible factors of underproduction of English RCs by Japanese ESL learners.

A Contrastive Analysis of Japanese and English Relative Clauses

Although her study is not aimed at investigating the issue of avoidance, Collier-Sanuki (1993) addresses the very same question raised by Kamimoto et al.: how often and when are RCs used in English and Japanese written discourse and why are there many cases where the use of RCs does not coincide in the two languages? Her dissertation is the first study that examines the usage and mechanisms of Japanese and English RCs by a detailed contrastive analysis. The purpose of her study is to offer fuller explanations of Japanese RCs from a semantic and pragmatic point of view. She claims that differing word order in English and Japanese, that is, the order of RCs and their head nouns, as well as their positions in matrix sentences, determines the usage and functions of RCs in each language, and affects the processing of sentences. She investigates the form, distribution, and function of Japanese RCs contrastively with English RCs and offers crucial information for the present study. Before I discuss the findings of the

contrastive study, I introduce the basic features of Japanese RCs in contrast to English RCs.

Japanese RCs in Contrast to English RCs

Japanese RCs have several characteristics that are different from English RCs. These characteristics have a close relation to the features of the Japanese language. I will briefly introduce the basic features of the Japanese RCs as well as the Japanese language while discussing Japanese RCs in contrast to English RCs. Japanese is a verb-final language, and the basic word order is SOV (Subject + Object + Verb). In Japanese the noun phrases (NP) are marked with postpositional particles to indicate the relationship to the verb phrase. Although verbs don't inflect for person and number, any NPs (subject or object), verbs, and particles are often omitted when these constituents are assumed to be known to the audience. In Japanese pragmatically recoverable information is often absent in a sentence (Iwasaki, 2002). The following are the major differences between English and Japanese RCs.

1. As a verb-final language, modifiers in Japanese precede the noun they modify, while in English the modifiers often follow the noun. Thus, Japanese RCs precede their head nouns while English RCs follow their head nouns.

[*John ga katta*] *kuruma*
John NOM buy-past car
The car [*which John bought*] (Collier-Sanuki, 1993, 3)

2. Japanese has no phonological, morphological, or syntactic distinctions between restrictive and nonrestrictive RCs, as the English translation below shows.

[*inu o katte-iru*] *Kimura-san*
 dog ACC keep:TE-ASP:NONPAST (name)-Mr.
 “The **Mr. Kimura** who keeps a dog (as opposed to the other Mr.
 Kimura who doesn’t)” or “**Mr. Kimura**, who keeps a dog”
 (Iwasaki, 2002, 180)

3. According to Matsumoto (1988b), Japanese differs from English and many other languages in that the head noun of Japanese RCs lacks an explicit marker that specifies its grammatical role in the modifying clause. Therefore, there is no relative pronoun corresponding to English *who*, *which*, *that*, *where*, etc. A special verb form, a noun modifying form, which is identical to a sentence-ending form, or non-polite form, in the modifying clause alone indicates RCs in Japanese (Kuno, 1973b, as cited in Collier-Sanuki, 1993). The absence of the relative pronoun and certain words in the RCs leads to multiple interpretations, such as the example below.

[*hon o katta*] *gakusei*
 book ACC bought student
 a. “**the student** [(who) bought a book]”
 b. “**the student** [(for whom) (Ø) bought a book]”
 c. “**the student** [(from whom) (Ø) bought a book]”
 (Matsumoto, 1988a, as cited in Collier-Sanuki, 1993)

Although the above examples in 2 and 3 are structurally ambiguous, usually context resolves the ambiguity. As these examples show, the interpretation of Japanese RCs relies much on the context. The context dependency of interpretation of Japanese RCs reflects the characteristics of the Japanese grammar that heavily depends on

semantics and pragmatics (Collier-Sanuki, 1993, 9). This fact leads Matsumoto (1988a, b, as cited in Collier-Sanuki, 1993) to claim that the traditional way of discussing RCs modeled on the syntactic analysis of English RCs cannot explain the construction of Japanese RCs. She proposed a definition that combines semantics and pragmatics with syntax. Collier-Sanuki adopts this definition since she wanted to identify the characteristics of Japanese RCs that are not observable by analysis based on the English grammar only. In the next section, I will discuss the definition proposed by Matsumoto.

Definition of a Japanese RC

According to Collier-Sanuki, the conventional Japanese RCs are those that meet a purely syntactic definition, that is, “a noun is ‘extracted’ from a sentence leaving a ‘gap’ in the clause to become the head noun which is modified by the rest of the clause” (Collier-Sanuki, 1993, 9). However, as I mentioned above, Matsumoto (1988b) claims that the traditional analysis based on the syntactic gap cannot explain the construction of Japanese RCs since interpretation of Japanese RCs depends so much on context. She argues “in Japanese, unlike English, the connection is not determined by the structure, but, rather, relies on a semantic and pragmatic understanding of the noun and clause” (Matsumoto, 1988a, as cited by Collier-Sanuki, 1993, 12). She defines the Japanese RC as follows:

Constructions in which the modifying clause hosts the head noun; i.e.,
constructions in which a member of the category denoted by the head noun
participates in a frame evoked by the main predicate of the modifying clauses.

e.g. [*tabeta*] *mise*
 ate shop
 “the shop (at which) (e1) ate (e2)”

The possible relationships between the modifying clauses and heads include (a) condition and consequence, (b) purpose and requisite, (c) simultaneous actions, events and states, (d) actions or events in simple temporal sequence, (e) topic and comment, and (f) part and whole.³

(Matsumoto, 1988a, as cited in Collier-Sanuki, 1993, 16)

The above RC can be read in three ways: (1) the shop which ate something (e2), (2) the shop which someone (e1) ate, and (3) the shop (at which) someone (e1) ate something (e2). However, native speakers of Japanese will not interpret the RC as either (1) or (2) unless it were used in very special context such as in a fairy tale. Interlocutors choose “the most likely or ‘natural’ connection between the clause and noun” depending on “a shared ‘world-view’” between them (Matsumoto, 1988b, 173). Matsumoto argues that what is crucial to interpret Japanese RCs is the semantic and pragmatic association between the head noun and its RC.

As discussed above, the interpretation of Japanese RCs is not determined solely based on syntactic rules, but relies heavily on the semantic and pragmatic relationship between the head noun and its modifying clause. This characteristic, as we will see in the

³ Matsumoto (1988a) defines the Japanese RCs as a Clause Host (CH) type noun-modifying clause (NMC). Most of the CH type NMCs are those that are conventionally classified as RCs, but the category also includes “truncate” NMCs (Teramura, 1977a, as cited in Collier-Sanuki, 1993), which most previous studies neglected. The truncate NMC is a type of RC which often requires extra-linguistic context, that is, socially and culturally dependent knowledge, to recover the meaning. The conventional RCs are the instances where fewer inferences are required for interpretation.

following sections, contributes to the differences in frequency, distribution, and function of RCs between English and Japanese. As I mentioned previously, based on her findings, Collier-Sanuki points out that the differences in RC use in English and Japanese may appear as underproduction of English RCs by Japanese learners of English. In order to gain information about differences in RC use in the two languages and investigate the possible factors of underproduction of English RCs by Japanese learner of English, next I will discuss one of the findings of the contrastive study: the frequency of RC use in English and Japanese texts.

Frequency of RC Usage

For studying frequency and discourse function of RCs, Collier-Sanuki examined the translations of four novels in English and Japanese. She chose novels which were originally written in a language other than Japanese or English since she wanted to avoid the influence from the languages being compared. The following are the four stories (Japanese titles are bracketed):

The First Love (*Hatsukoi*): originally written in Russian

A Madman's Diary (*Kyojin nikki*): originally written in Chinese

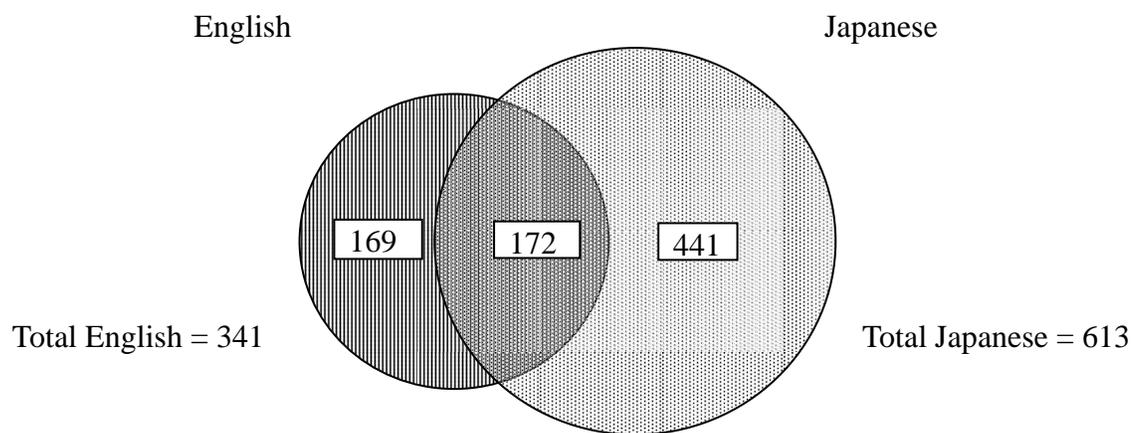
Demian (*Demian*): originally written in German

Preface (*Jijo*): originally written in Chinese

The entire texts of *The First Love* and *A Madman's Diary* and the first seventy sentences of chapters one through four of *Demian* were examined quantitatively. *Preface*, the other Chinese story, was used for qualitative analysis.

Figure 3 below summarizes the occurrences of RCs in *The First Love*, *A Madman's*

Diary, and *Demian*. There are 341 RCs in English and 613 RCs in Japanese, that is, about twice ($1.8 = 613/341$) as many RCs in the Japanese text as in English. Although the frequency of Japanese RCs is lower than that found in *The Great Gatsby* by Kamimoto et al. (1992), the result shows the same tendency: RCs are used much more frequently in Japanese than in English. In addition, as in *The Great Gatsby*, a number of RCs do not co-occur in the two languages. About 50 % ($169/341$) of English RCs and about 70% ($441/613$) of Japanese RCs do not have counterparts in the other language.



(Collier-Sanuki, 1993, 69)

Figure 3: Total Number of Relative Clauses Used in *Love*, *Demian* and *Madman*

When Collier-Sanuki examined the number of RCs in each story, she found the frequency varies among the three stories. The ratios between the number of RCs used in Japanese and that in English for *The First Love*, *A Madman's Diary*, and *Demian* are 2.1 ($438/207$), 1.5 ($52/34$), and 1.2 ($123/100$), respectively. She concludes that generally

Japanese uses RCs about 1.5 times more frequently than English does.

The findings above lead to the following questions that Kamimoto et al. also raised: Why are RCs used more often in Japanese than in English and why are there many RCs in English as well as in Japanese which do not have counterparts in the other language? Answering these questions would help unveil the differences in RCs use in the two languages and investigate the possible factors of underproduction of English RCs by Japanese learners of English. In the next section, I will discuss the distribution of RCs in the two languages studied by Collier-Sanuki.

Corresponding Strategies of RCs

Table 1 below shows how each language expresses the same portion of the original text without using RCs when the other language does use RCs.

Table 1: Distribution of Relative Clause Counterparts in *Love*, *Madman*, and *Demian*

Counterpart in the other language	English is relative clause		Japanese is relative clause	
Separate sentence/clause	79	(46.7%)	26	(5.9%)
Adjective/NP modification	31	(18.3%)	186	(42.2%)
Prepositional phrase	0	(0.0%)	64	(14.5%)
Participle	1	(0.6%)	8	(1.8%)
Determiners	2	(1.2%)	15	(3.4%)
Set off	0	(0.0%)	17	(3.9%)
Paraphrase	28	(16.6%)	72	(16.3%)
Other/no words	28	(16.6%)	53	(12.0%)
TOTAL	169	(100.0%)	441	(100.0%)

(Collier-Sanuki, 1993, 83)

Note: The boldface type is preserved from the original source.

Table 1 shows that there are two significant distributional skewings. First, almost half of the RCs in English (46.7 %) are expressed in separate sentences or clauses in Japanese, while only about 6 % of Japanese RCs are rendered into English as separate sentences or clauses. Second, over 40 % of Japanese RCs are expressed with adjectives in English, and about 20 % of English RCs correspond to adjectives or nominal modification, such as NP *no* NP (ex. *byoki no hito*: sickness GEN person = sick person), in Japanese, which suggests a close relationship between adjectives, nominal modification, and RCs.

The other items in the table also indicate usage differences in RCs in the two languages:

- About 15% of Japanese RCs are expressed as prepositional phrases, or so-called reduced RCs, in English.
- About 17% of RCs in each language are expressed by paraphrasing due to structural and/or semantic restrictions.
- Another 17% of English RCs and 12% of Japanese RCs are expressed in different words or simply omitted.
- Some Japanese RCs (3.4%) are expressed as determiners in English reflecting the lack of an article system in Japanese.

These distributional differences of RCs in the two languages suggest that English and Japanese use different structures or words to convey some of the same discourse functions. In fact, Collier-Sanuki examined why one of the two languages uses a RC while the other uses a different strategy and pointed out the same or differing discourse

functions of RCs between the two languages.

In order to investigate the differences in RC use in the two languages, in the next section I will explain the functional differences found by Collier-Sanuki.

Function of RCs in English and Japanese

The major function of restrictive English RCs is to identify and restrict the referent of the head noun, and that of non-restrictive RCs is to supply additional, background information. Some of English RCs are not rendered into Japanese as RCs because of syntactic as well as functional restrictions. As shown in Table 1, almost half of the English RCs are expressed in Japanese as separate sentences or clauses. There are three possible syntactic restrictions that lead to different usages between the two languages: (1) the different word order between the two languages changes meaning of the sentences with RCs when some English RCs are translated into Japanese as RCs, (2) Japanese does not have non-restrictive RCs corresponding to English non-restrictive RCs that take the whole preceding sentence as a co-referent; therefore, such English RCs are translated as separate sentences, (3) English sentences with the possessive relative pronoun, *whose*, especially for non-human objects, tend to be translated into two separate sentences or clauses in Japanese because there is no equivalent of *whose* in Japanese. In addition to these structural restrictions, functional restrictions are at work. Non-restrictive English RCs stating additional or parenthetical information would not be translated into Japanese as RCs and are often rendered into two separate clauses. This is because Japanese RCs that precede their head nouns tend to carry “communicatively more important information” than their head nouns (Collier-Sanuki, 1993, 58). Therefore, English RCs

that merely add information will not be rendered into Japanese as RCs. Such RCs are likely to be translated with an adverbial clause in Japanese.

As mentioned above, Japanese RCs carry communicatively more important information than their head nouns and contribute to the development of communication. They provide a wide range of functions by hosting their head nouns or providing information to help understand head nouns. Their functions agree with the definition of Japanese RCs proposed by Matsumoto, which was discussed earlier: “constructions in which the modifying clause hosts the head noun” (Collier-Sanuki, 1993, 16). For example, Japanese often uses lengthy subjects with RCs to set up “situational frames” (117) to help the audience understand the situations in which their head nouns are involved. In English, the function is usually given by adverbial clauses such as “because”, “although”, “when”, etc, or conjunctions such as “and”, “for”, etc. In addition, the “situational frames” are usually established by information which is known to the audience as “shared” experience or shared “world-view” (121). Recall that Matsumoto pointed out that shared “world-view” plays a crucial role to understand Japanese RCs. Japanese RCs which provide shared information function as a clue for the audience to anticipate and understand the coming head noun. This makes it possible for Japanese RCs to introduce a new referent into discourse and work as “cohesive devices’ to provide a connection between the audiences’ previous knowledge and the new information” (122). Finally, Japanese RCs which describe the property and condition of their head nouns provide the function of adjectives in English (89). Japanese RCs also express the abstract theme by describing the condition and characteristics of their head nouns and mark “the

major- and minor- themes” in the discourse. Such Japanese RCs are likely to be translated into English as adjectives or other noun phrase modifications (138).

The above discussion shows that RCs in the two languages provide different discourse functions, which, in turn, result in differences in frequency and distribution of RCs in the two languages. Then, how might the functional differences influence RC use in English by the Japanese learners? In the next section, I will synthesize findings in previous research and discuss the purpose of this study.

Frequency and Discourse Functions of RCs and Avoidance

The contrastive analysis finds different structures or words are used in the two languages to convey some of the same discourse functions. This fact suggests that when native speakers of the two languages perform in their L2, the L2 speakers who are not used to the function or mechanisms of some types of RCs in L2 may not use them. Collier-Sanuki (1993) suggests the relationship between frequency and discourse functions of RCs and avoidance as follows:

The differences in relative clause frequency are due to the different discourse functions and mechanisms that relative clauses have in different languages. Such differences may also indicate that avoidance in producing relative clauses in a target language is due to the student’s unfamiliarity with their discourse functions, and so is possibly unintentional. (1993, 41)

She infers that unfamiliarity of discourse functions of RCs in L2 lead to unintentional underproduction of RCs in L2. Her view of avoidance is somewhat parallel to what Zhao (1998) and Li (1996) argue: underproduction of English RCs by Chinese

ESL learners is not conscious avoidance, but subconscious underproduction, or transfer of the construction strategies of Chinese into English. The three studies suggest that avoidance may not be caused only by the structural difference of RCs between L1 and L2, but also by the differences in the distribution and function between L1 and L2.

The above discussion implies that Japanese learners of English may not produce English RCs that do not have equivalents in Japanese because learners are not familiar with the use of this type of English RCs, which may result in underproduction of English RCs. This gives us one reason for the avoidance phenomenon of English RCs by the Japanese learners.

However, we still do not have an explanation of how Japanese RCs that do not have equivalents in English affect the use of RCs in English. Considering that the contrastive study by Collier-Sanuki (1993) discovers there are about 1.5 times as many RCs in Japanese as in English and so many Japanese RCs (over 70 %) are not expressed in English as RCs, it is important to know if Japanese learners of English try to produce RCs that do not have equivalents in English, that is, transfer the construction strategies of Japanese RCs into English. In the previous study on avoidance, Kamimoto et al. (1992) conclude that the relatively low frequency of Chinese RCs can be an explanation of the low production rate of English RCs by Chinese learners of English, but the same explanation cannot apply to Japanese learners of English since the researchers found more RCs in a Japanese translation than in the English original. On the other hand, even though the studies report that RCs are used more frequently in Japanese texts than in English ones, we cannot simply assume that the high frequency of Japanese RCs would

reflect on the RC use in English by the Japanese learners. Since so many Japanese RCs are not rendered into English as RCs, and specifically a large group of these RCs (over 40 %) is expressed as adjectives in English, we should examine how the usage differences reflect on the interlanguage of the Japanese learners, that is, whether Japanese learners transfer construction strategies of Japanese RCs into English and produce RCs in English or not.

In order to investigate how Japanese RCs might affect the RC production in English by Japanese learners, we will further examine the usage of Japanese RCs and their non-RC counterparts in English. In particular, as mentioned above, we will look at the group of Japanese RCs that correspond to English adjectives.

Japanese RCs and English Adjectives/Noun Modifications

According to the contrastive study by Collier-Sanuki, among 441 Japanese RCs that do not have counterparts in English, 186 (42.2 %) are expressed in English as adjectives and noun modifications.⁴ At the same time, about 20 % of English RCs are rendered into Japanese as adjectives and nominal modifications. This suggests a close relationship between RCs and adjectives as well as noun modifications. Collier-Sanuki explains this phenomenon by hypothesizing that “RCs and adjectives belong to the same cross-linguistic category [called “Property Concepts” (Thompson, 1988, as cited in Collier-Sanuki, 89)] in Japanese and that RCs compensate for a lack of adjectives

⁴ According to Collier-Sanuki, the noun modifications include (1) past participle adjectives, such as a clean-picked herring bone and a woman’s cracked voice, and (2) hyphenated-words, such as the at-the-time-popular song and never-before-experienced sensations.

expressing appropriate concepts” (1993, 89). According to Thompson, the notion of “Property Concepts” was originally proposed by Dixon (1977, as cited in Collier-Sanuki, 1993) as “universal Adjective types” which help explain a language that either lacks a major class of adjectives or has only a small class of adjectives. The “universal Adjective types”, which express properties, qualities, and characteristics of referents, are categorized into the following seven types shown in Table 2.

Table 2: Universal Adjective Types

1. Dimension – big, little, long, wide, ...
2. Physical property – hard, heavy, smooth, ...
3. Color
4. Human propensity – jealous, happy, clever, generous, proud, ...
5. Age – new, young, old, ...
6. Value – good, bad, pure, delicious, ...
7. Speed – fast, slow, quick, ...

(Dixon, 1977, as cited in Collier-Sanuki, 1993, 90)

Thompson adopts the definition of “universal Adjective types” for the notion of “Property Concepts” and calls a word that expresses one of these types of properties a “Property Concept Word” (1988, 168).

In English, Property Concepts belong to a class of adjectives. On the other hand, in Japanese, Property Concepts share some features with Verbs and others with Nouns. In Japanese, Property Concepts are expressed using adjectives (verbal adjectives), nominal adjectives, nominal modifications, such as *byoki no hito* (sickness GEN person = sick person) and, as Collier-Sanuki proposes, RCs. She argues that some Japanese RCs are

“Property Concept expressions” (94) since RCs consist of a noun and a verb, and the verb form used in a RC is a noun-modifying form, which indicates a close relationship to adjectives. In Japanese, Property Concepts listed in Table 2 are often expressed with RCs, and in fact, some Property Concept Words may be expressed only with RCs as the examples shown in Table 3.

Table 3: Japanese RCs Expressing Property Concepts

1. Dimension:	[se ga takai] hito Back NOM high person (a person whose back is high = tall person)
2. Physical property:	[fototta] hito gain-weight-past person (a person who gained weight = a fat person)
3. Color:	[midorigakatta] kiiro green-become-like-past yellow (a shade of yellow which has green = greenish yellow)
4. Human propensity:	[kokoro ga hiroi] hito mind NOM broad person (a person whose mind is broad = generous person)
5. Age:	[toshi o totta] hito age ACC take-past person (a person who took many years = an old person)
6. Value:	[atama ga ii] hito head NOM good person (a person whose head is good = a smart person)
7. Speed:	[ashi ga hayai] hito leg NOM fast person (a person whose leg is fast = a fast runner)

(Collier-Sanuki, 1993, 92)

Collier-Sanuki further examines the findings of the discourse analysis by Thompson (1988) and points out that Japanese RCs which precede their head nouns describe the properties or conditions of their head nouns and function to introduce new referents into discourse. In English, attributive adjectives and noun modifications, such as hyphenated words, provide the same function. One of significant discoveries of Thompson's study is that most attributive adjectives in English function to introduce new participants into the discourse. In other words, attributive adjectives functioning to re-identify or distinguish an already introduced referent are extremely rare (1988, 177). Collier-Sanuki argues that Japanese RCs provide the function of introducing new referents into discourse just like English attributive adjectives do.

In this section, we have studied that some Japanese RCs and English adjectives belong to the same category of Property Concepts that express properties, qualities, and characteristics of referents and provide the same function, introducing a new referent into discourse. Based on this fact, in the next section, I will propose the research questions of this study.

Research Questions

In order to investigate how Japanese RCs might affect the production of English RCs by Japanese learners of English, we examined, in the above section, a large overlap of correspondence between Japanese RCs and their English counterparts, adjectives and noun modifications. Collier-Sanuki suggests that some Japanese RCs belong to the

category of Property Concepts, which is a more general category than Adjectives, and that RCs compensate for a lack of adjectives in Japanese. Property Concepts are frequently expressed with RCs in Japanese, and sometimes RCs may be the only way to express the concept. In addition, Japanese RCs and English adjectives as well as noun modifications provide the same function, introducing a new referent into discourse, by describing the properties and conditions of the referent.

These findings lead to the following questions: Do Japanese learners of English use adjectives in English to realize the function/meaning of Japanese RCs since adjectives and RCs are in the same category in Japanese and because Japanese RCs and English adjectives provide the same discourse function? Or do they transfer construction strategies of Japanese RCs and produce RCs in English? Or do they produce other structures than adjectives and RCs in English? In addition, is their choice between adjectives, RCs, or other structures influenced by their command of RCs in English as well as their knowledge of adjectives in English? The answer to these questions could tell us if the relatively high frequency of Japanese RCs reflects on the use of RCs in English by Japanese learners.

I propose to investigate the following two research questions:

1. Do Japanese learners of English transfer the use of RCs in Japanese into English? That is, which strategies do they use in English, RCs, adjectives, or other structures, to express the function/meaning of Japanese RCs?
2. How is the transfer influenced by the learners' command of RCs in English as well as by the learners' knowledge of adjectives in English which express the concept conveyed

by Japanese RCs?

In this chapter, I reviewed previous studies on avoidance and discussed the findings of the contrastive study on RCs between English and Japanese by Collier-Sanuki (1993) as the basis of my study. Then, I synthesized the discoveries found in the previous studies and proposed the research questions for my study. In the next chapter, I will describe the qualifications of my research participants, explain how the research design was identified, and describe the materials used for data collection.

CHAPTER THREE: METHODS

The current study on adult Japanese learners of English examines whether the Japanese learners transfer the use of RCs in Japanese into English. The intent of the study is to discover if the frequent occurrence of Japanese RCs influences the production rate of English RCs by the learners. As discussed in Chapter Two, an analysis of the literature on possible factors influencing avoidance of English RCs by Chinese and Japanese learners, which was claimed by Schachter (1974), has led me to develop the following two research questions:

1. Do Japanese learners of English transfer the use of RCs in Japanese into English? That is, which strategies do they use in English, adjectives, RCs, or other structures, to express the function/meaning of Japanese RCs?
2. How is the transfer influenced by the learners' command of RCs in English as well as by the learners' knowledge of adjectives in English that express the concept conveyed by Japanese RCs?

In this chapter, I will explain how I attempted to answer these two research questions. I will explain the criteria I used to select the research participants and describe the participants. I will outline the research paradigm and explain the materials I used for data collection.

Participants

The participants in this study were 21 adult Japanese learners of English living in the U.S. Before describing the linguistic background of the participants, I will first explain how the criteria to select the participants were decided.

Criteria of Participants

As stated in research question 2, the learners' command of RCs in English and the knowledge of adjectives corresponding to Japanese RCs are two factors that might influence transfer of the use of Japanese RCs into English. Therefore, as explained later in this chapter, the study design includes assessing the participants' command of RCs in English and their knowledge of certain adjectives by the sentence combination test and the Vocabulary Knowledge Scale (Paribakht & Wesche, 1997) (VKS), respectively. In other words, the areas of the participants' English proficiency concerned in this study would be measured by the two tests.

Since basic levels of learners might not have enough knowledge of English RCs to use them in the translation test for this study, prospective participants were expected to be at least intermediate level. On the other hand, it was likely that participants had to be located from various programs and that the measures of English proficiency levels used in the programs would vary. There would be no standard measures of proficiency levels across the programs. Therefore, in this study, participants who met at least one of the following criteria were considered to have at least intermediate proficiency.

- He/She has taken higher levels of ESL classes.
- He/She has graduated from a college in Japan.

- He/She has taken academic courses in a college in the U.S.

Description of Participants

Twenty-one adult Japanese learners of English living in the U.S. participated in this study. Seven of them were taking higher levels of adult ESL classes in the community, 3 have been enrolled in an ESL program in a community college, 2 were exchange students from Japan taking academic courses in a college, 4 were doing degree studies in a college, one has just graduated from a college, and 4 were visiting scholars in a university. The length of stay in the U.S. of the 21 participants was less than three years: 10 had been in the U.S. for less than a year, 7 for one to two years, and 4 for two to three years. All participants had graduated from high school in Japan and had received formal instruction in English at least six years in Japan: three years in middle school and another three years in high school.

Research Design

In this section, I will outline the research paradigm and explain the reasons for choosing the particular instruments I used with participants. My research consisted of four parts. First, participants took the translation test that asked them to translate Japanese sentences containing Japanese RCs into English. The test was created to address research question 1, that is, to examine the strategies – adjectives, RCs, or other structures – that the learners use in English to express the function/meaning of Japanese RCs. The translation method was used because it can clearly show the choice of translation strategies in English. In addition, translation was used in a previous study on avoidance

by Li (1992), as mentioned in Chapter Two, and is considered to be a reasonable way to examine the linguistic means the participants use to express the concept conveyed by Japanese RCs. The Japanese RCs used in the test were those RCs that meet the definition proposed by Matsumoto (1998a, as cited in Collier-Sanuki, 1993). As discussed in Chapter Two, Matsumoto defines Japanese RCs as “constructions in which the modifying clause hosts the head noun” (16). The definition reflects the characteristics of Japanese RCs whose interpretation largely depends on the semantic and pragmatic relationship between the head noun and the modifying clause. The definition includes both conventional Japanese RCs and those RCs that cannot be explained by the traditional analysis based on the syntactic gap. Although the definition includes the two types of Japanese RCs, the translation test consisted of only the conventional RCs.

Second, the sentence combination test was given to measure the participants’ knowledge of rules to construct RCs in English. There were two purposes for the assessment: one was to answer research question 2, how the choice of translation strategies is influenced by the participants’ command of RCs in English, the other was to ensure that the participants have at least some knowledge of RC production in English because if the participants do not know how to form a RC, they might not use it in the translation test due to their lack of knowledge.

Third, the Vocabulary Knowledge Scale (VKS) (Paribakht & Wesche, 1997) was administered to answer research question 2, how the transfer of RC use in Japanese into English is influenced by the amount of knowledge of adjectives in English. The VKS was chosen based on two reasons: (1) the test can be used with any set of words that

researchers are interested in, and (2) the test is designed to distinguish stages in learners' knowledge of particular words. It assesses not only knowledge of word meaning but also the "productive vocabulary use", which is necessary for the participants to translate Japanese sentences into English. The "productive vocabulary use" involves "retrieving and producing the appropriate spoken or writing form" and is distinguished from "receptive vocabulary use" in retrieving a meaning of a word while listening and reading (Nation, 2001, 25). Target words in the test were adjectives expressing the function/meaning of Japanese RCs that are used in the translation test.

Lastly, the participants had a prompted interview, stimulated recall, with me after the three written tests. The purpose of the interview was to get information from the participants about the reasons they chose particular strategies in the translation test. According to Gass & Mackey (2000), stimulated recall is an introspective method and a useful tool to investigate learners' thought process. It can help to identify the linguistic knowledge a learner uses when making linguistic choices or judgments. In stimulated recall sessions, learners are asked to recall thoughts they had in an original event while hearing or seeing cues or stimuli, such as a video of the event or a piece of writing they completed. In the current study, sentences translated by the participants were used as stimuli. The interview was conducted in Japanese and recorded on an audio tape.

Each of the three tests and the interview were given individually. In the following section, the materials used in these tests and the stimulated recall are described in greater detail.

Materials

Translation Test

There are 16 sentences in Japanese in the translation test, and the participants were asked to translate them into English (see Appendix C and D). The test was not timed. Each sentence contains a Japanese RC whose counterpart is expected to be an adjective in English. The RCs used in the test are gapped RCs, or conventional RCs, in which a gap in a modifying clause is coreferent with the head noun. The case relation of the head noun with respect to the predicate of the RCs is clear, so that the relation between the head noun and the RCs should be easily associated.

The Japanese RCs and corresponding adjectives in English were chosen on the basis of the types of Property Concepts (see Table 2 in Chapter Two) they express. As shown in Table 4 below, 21 adjectives were used, and at least one item was selected in each type of seven Property Concepts. Five of the Japanese RCs and corresponding adjectives were adapted from examples in Table 3 in Chapter Two, Japanese RCs expressing Property Concepts.

Table 4: Adjectives Corresponding to Japanese RCs

Property Concept	Adjectives in English	
1. Dimension	tall	wide
2. Physical Property	heavy	fine/delicate
3. Color	reddish	
4. Human Propensity	generous/broad-minded	talented/brilliant
5. Age	old	new
6. Value	smart	familiar
	nutritious	elaborate/detailed
	pleasant/engaging	
7. Speed	fast	quick

As shown in Table 4, 21 adjectives were chosen as equivalents of 16 Japanese RCs. The number of adjectives does not correspond to that of the Japanese RCs because two adjectives were chosen as a possible translation of the following four Japanese RCs: *kime no komakai* (fine/delicate), *kokoro ga hiroi* (generous/broad-minded), *saino no yutakana* (talented/brilliant), and *kanji no yoi* (pleasant/engaging). There was more than one possible English translation for each of the 16 Japanese RCs, and these 21 adjectives were chosen because they most closely expressed the meaning of the Japanese RCs in the context.

It should be noted that the frequency of occurrence of these adjectives varies. This means that there are adjectives that participants might have encountered often as well as those that the participants might have come across less frequently. In other words, participants' familiarity with the adjectives or participants' knowledge of the adjectives could vary by words. The frequency of adjectives used in this study was examined in *The Educator's Word Frequency Guide* (Zeno, Ivens, Millard, & Duvvuri, 1995). The

frequency is indicated by the Standard Frequency Index (SFI) (see Table 5), which is a logarithmic transformation of the *U*-value – the frequency of a word per million tokens in a corpus of infinite size.

Table 5: Frequency of Occurrence of the Adjectives Used in the Study

SFI	Adjectives (SFI)
20.0 – 29.9	broad-minded (25.1)
30.0 – 39.9	–
40.0 – 49.9	nutritious (43.0), engaging (44.3), reddish (46.6), talented (46.9), generous (49.9)
50.0 – 59.9	elaborate (50.9), detailed (52.6), delicate (52.9), brilliant (53.0), smart (53.6), pleasant (56.5), quick (58.2), familiar (58.5)
60.0 – 69.9	tall (61.3), wide (61.5), fine (61.9), heavy (62.1), fast (62.1), old (68.8)
70.0 – 79.9	new (71.3)

As Table 5 shows, the frequency of occurrence of the adjectives varies from 25.1 (*broad-minded*) to 71.3 (*new*).

Although certain adjectives seemed likely translations for the Japanese RCs, there is a range of possible translations. A translation not exactly expressing the meaning of a Japanese RC was accepted as long as the author was able to understand its intended meaning. All the translations given by the participants were within the range of acceptable translation.

Sentence Combination Test

The sentence combination test (see Appendix E and F) was created by picking items from *Understanding and Using English Grammar (Third Edition)* (Azar, 1999). The book was chosen because it is a widely used teaching text of grammar for

intermediate to advanced ESL/EFL students. In the test, the participants were directed to combine two sentences using relative pronouns such as *who*, *which*, *that*, *whose*, etc, as shown in an example below:

I thanked the woman. She helped me. → I thanked the woman who helped me.

There are 8 items in the test, and the types of RCs as well as the number of each type of RCs in the test were determined according to the following criteria: (1) there are at least one each of the four basic types of RCs, that is, Subject head-Subject relative (SS), Object head-Subject relative (OS), Subject head-Object relative (SO), and Object head-Object relative (OO),⁵ and (2) the number of each type reflects the proportion of RC types into which the 16 Japanese RCs in the translation test are likely to be rendered when they are translated into English as RCs. It was found that there were other types of RCs than the basic four types among those RCs into which the Japanese RCs would be translated: RCs using a relative pronoun, *whose*, and RCs whose head noun is a predicate noun (PN) in a main clause. Therefore, the type of RCs and the number of each type in the test were decided as follows: two OS types, one each for SS type, SO type, OS type, and PN type, and two RCs with the relative pronoun *whose*. The test was not timed.

The Vocabulary Knowledge Scale

The Vocabulary Knowledge Scale (VKS) was chosen to assess the participants'

⁵ SS, OS, SO, and OO mean the following:

SS: subject of the embedded sentence is identical to the subject of the main clause.

OS: subject of the embedded sentence is identical to the object of the main clause.

SO: object of the embedded sentence is identical to the subject of the main clause.

OO: object of the embedded sentence is identical to the object of the main clause.

(Celce-Murcia & Larsen-Freeman, 1999)

knowledge of the adjectives used in the translation test. The target words consisted of the 21 adjectives in Table 4 that correspond to Japanese RCs used in the translation test.

The VKS consists of two scales: one for eliciting responses from the participants, “VKS elicitation scale”, and one for scoring the responses, “VKS scoring categories” (Paribakht & Wesche, 1997, 180 - 181). The participants are presented the VKS elicitation scale (see Figure 4 below) with a list of target words and asked to indicate their level of knowledge for each word. The scale ranges from total unfamiliarity to the ability to use the word with grammatical and semantic accuracy in a sentence (Paribakht & Wesche, 1997, 179).

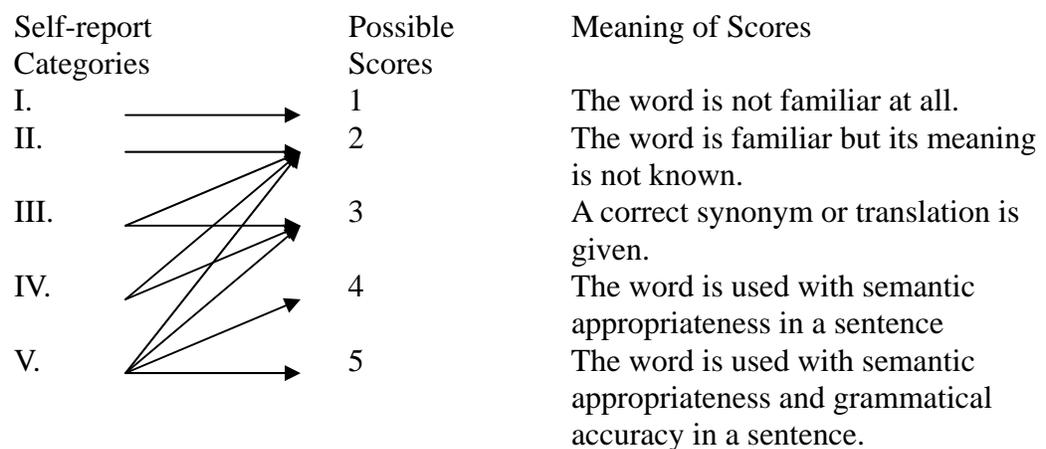
- I. I don't remember having seen this word before.
- II. I have seen this word before, but I don't know what it means.
- III. I have seen this word before, and I think it means _____. (synonym or translation)
- IV. I know this word. It means _____. (synonym or translation)
- V. I can use this word in a sentence: _____. (Write a sentence.) (If you do this section, please also do Section IV.)

(Paribakht & Wesche, 1997, 180)

Figure 4: VKS Elicitation Scale – Self-report Categories

The VKS scoring categories (see Figure 5 below) translate the participants' responses into test scores. Scores of 1 and 2 are given for the self-report word knowledge of Category I and Category II, respectively. As arrows in the figure show, participants also receive a score of 2 if they give wrong responses in higher Categories III, IV, and V. A score of 3 means that an acceptable synonym or translation has been provided in

Categories III or IV. A score of 4 or 5 is given for the sentences written in Category V. A score of 4 is given if a target word is used in an appropriate context but in a grammatically incorrect way: for example, *This famous player announced his retire* (Paribakht & Wesche, 1997, 180). A score of 5 is given only when a target word is used with both an appropriate meaning and the correct form.



(Paribakht & Wesche, 1997, 181)

Figure 5: VKS Scoring Categories – Meaning of Scores

In the current study, a Japanese translation of the VKS elicitation scale was used (see Appendix G and H). The translated version was created in order to reduce the time needed for the participants to comprehend sentences in the categories and to learn the process of test-taking.

Stimulated Recall

The stimulated recall sessions were conducted after the three written tests. While

looking at the translated sentences they had completed in the translation test, the participants were asked to tell the reasons why they had chosen the particular strategies, such as adjectives, RCs, or other structures. In this section, first I will explain how data was collected using stimulated recall methodology, and then I will describe how the data was analyzed.

Data collection – stimulated recall protocol. The following is a research protocol describing stimulated recall procedures and instructions for me as well as for participants.

While the participants are working on the VKS, check the participants' answers in the translation test and the sentence combination test. As for the translation test, look at the strategies the participants used to translate Japanese RCs into English. Categorize them into adjectives, RCs, or other strategies. Anticipate the questions or prompt that will be given to the participants. Look for errors and/or missing words and speculate on the difficulties that the participants might have had in the translation task. As for the sentence combination test, check the answers to find out if the participants have knowledge to produce RCs in English. After the participants finish the VKS, provide an explanation of the next step.

Now, I'd like to ask you to tell me about what you've written in the translation task. Did you have any difficulties in translation, or are there any sentences that you had a hard time translating? (The questions are aimed at finding difficulties the participants might have had in translation since the difficulties might have lead them to choose particular strategies.)

If the answer is yes, ask:

In which sentence/part of a sentence did you have difficulties?

Why was that sentence/part of a sentence difficult to translate?

Did you think about translating in other ways?

Why did you choose the way you translated?

If the answer is no, go on to the next question.

Point out the sentences in which Japanese RCs have been translated as RCs in English and ask:

Why did you use RCs to translate that part of the sentence?

Did you think about using other ways to translate?

Why did you think it was better to use RCs than other ways?

Did/Didn't you think about using an adjective instead of RCs?

Point out the sentences in which Japanese RCs have been translated as adjectives in English and ask:

Why did you use an adjective to translate that part of the sentence?

Did you think about using other ways to translate?

Why did you think it was better to use an adjective than other ways?

Did/Didn't you think about using RCs instead of an adjective?

Point out the sentences in which Japanese RCs have been translated using strategies other than RCs and adjectives in English and ask:

Why did you choose the way you did to translate the sentence?

Did you think about using other ways to translate?

Why did you think it was better to use the way you did than other ways?

When the participants have finished the recall, ask additional debriefing questions that may elicit useful data to address the research questions.

In general, when do you use RCs in writing or speaking in English?

Are there any situations in which you don't use RCs? If so, in which situation don't you use RCs? Can you give me an example?

Do you have any comments on the translation task? Do you have any comments on the sentence combination task? Do you have any comments on the vocabulary questionnaire?

Data analysis. Analyzing the stimulated recall data included transcription, coding categories, and an interrater reliability test.

- Transcription and coding categories: First, written transcriptions were made for each verbal data for each participant. Second, the transcribed data was segmented into certain groups according to the translation strategies. Third, the segmented data was carefully reviewed to determine reasons of using the particular strategies, and a list of reasons was compiled for each of the strategies. Then, the lists were analyzed to classify the reasons into certain categories.

- Interrater reliability test: In order to obtain the reliability of the analysis, the interrater reliability was examined in the following ways. The transcribed data of 4 out of 21 protocols, translated sentences by the 4 participants, and a list of the categories were given to a second rater, who was a native Japanese speaker. The rater was asked to classify each response in the data according to the categories given. The results were compared with my analysis and the percent agreement between the two raters was calculated.

In this chapter, I described the participants, outlined the research paradigm, and explained the materials used for data collection. Identifying the research methods enabled me to investigate the research questions: whether Japanese learners of English transfer the use of RCs in Japanese into English, and whether the transfer is influenced by the learners' command of RCs in English as well as the learners' amount of knowledge of adjectives corresponding to Japanese RCs. In the next chapter, the results of the three written tests and the stimulated recall interview are presented and integrated to answer the research questions.

CHAPTER FOUR: RESULTS AND DISCUSSION

In this capstone, I'm studying whether Japanese learners of English transfer the use of RCs in Japanese into English in order to find out if the frequent occurrence of Japanese RCs reflects the production rate of English RCs by the Japanese learners. The contrastive study by Collier-Sanuki (1993) reveals that a large number of Japanese RCs provide the same function/meaning of adjectives in English and could be rendered into English as adjectives. Based on her findings, this study investigates two research questions:

1. Do Japanese learners of English transfer the use of RCs in Japanese into English? That is, which strategies do they use in English, adjectives, RCs, or other structures, to express the function/meaning of Japanese RCs?
2. How is the transfer influenced by the learners' command of RCs in English as well as by the learners' amount of knowledge of adjectives in English that express the concept conveyed by Japanese RCs?

As described in Chapter Three, three written tests – a translation test, a sentence combination test, the Vocabulary Knowledge Scale (Paribakht & Wesche, 1997) (VKS) – and a stimulated recall interview were designed to address the research questions. In this chapter, I will first present the results of the three written tests and the interview taken by 21 adult Japanese learners of English. In the second part of the chapter, I will discuss the results in order to answer the two research questions.

Results

Translation Test

The first task given to the participants was the translation test. The translation test was created to answer research question 1, that is, to discover the choice of translation strategies – adjectives, RCs, or other structures – that the participants used to express the function/meaning of Japanese RCs. The participants were asked to translate sixteen Japanese sentences, each of which contained a Japanese RC, into English.

Twenty-one participants produced 334 translated sentences. There were 336 (= 21 x 16) Japanese sentences in the translation test, but two participants did not give any translation for 8 sentences. In addition, one participant gave alternative translations for 6 English sentences. Therefore, the total number of translated sentences was 334 (= 336 – 8 + 6). These translated sentences were examined, and translation strategies were classified into four categories – *adjectives*, *RCs*, *other structures*, and *no answer*. The category of no answer was created for the instances in which participants did not give any translation of the sentence or did not give a translation of Japanese RCs. The following table shows the frequency of these strategies (see Appendix I for data on each participant and Appendix J for each sentence).

Table 6: Frequency of Translation Strategies

Translation strategies		Frequency of strategies	
Major categories	Minor categories	Major categories	Minor categories
Adjectives		223 (65%)	
RCs		51 (15%)	
Other structures		49 (14%)	
	Noun phrases		19 (6%)
	Adjective phrases		11 (3%)
	Noun-modifying phrases		10 (3%)
	Verb/verb-modifying phrases		5 (1%)
	Multi-clausal		4 (1%)
No answer		19 (6%)	
	No translation of RC		11 (3%)
	No translation of sentence		8 (2%)
Total		342 (100%)	

As shown in Table 6, participants used adjectives 223 times (65%), RCs 51 times (15%), other structures 49 times (14%), and no answer 19 times (6%). The category of other structures consists of five minor categories: *noun phrases*, *adjective phrases*, *noun-modifying phrases*, *verb/verb-modifying phrases*, and *multi-clausal*. The category of no answer is divided into two minor categories: *No translation of RC* and *No translation of sentence*.

In order to explain the meaning of the categories, I illustrate examples of each category below.

1. Adjectives include participles and hyphenated-words.

a new apartment, a newly-built apartment, a brand-new apartment

2. RCs include both restrictive and non-restrictive RCs that have relative pronouns, *who*, *whom*, *whose*, *which*, and *that*.

We are looking for a person who can run fast for our baseball club.

3. Other structures consist of five minor categories.

- Noun phrases: *The smart will likely win this game.*
- Adjective phrases are distinguished from adjectives in this study and consist of an adjective and other element such as adjectives, adverbs, or prepositions except intensifiers and obligatory prepositions with predicate adjectives: *It is important to take good balanced food when you have a cold.*
- Noun-modifying phrases: *She is a pianist with lots of talents.*
- Verb/Verb-modifying phrases: *That waitress told the customer nicely.*
- Multi-clausal: *She is a pianist and have great potential.*

4. No answer consists of two minor categories.

- No translation of RC: *The soap is good for _____ skin.* (The space for a translated word has left blank.)
- No translation of sentence means there is no translation for a Japanese sentence.

Among the strategies shown above, adjectives were used most often (65%) to translate Japanese RCs. The second most frequent strategy was using RCs (15%), and the third most frequent strategy, other structures, was chosen almost the same number of times as RCs (14%). Fifty-one out of 342 (15%) Japanese RCs were also expressed as RCs in English. In other words, the participants transferred the use of RCs in Japanese into English only 15 % of the time.

While the results give us general ideas on the choice of the strategies to express the

function/meaning of Japanese RCs by the learners, close examination reveals some differences in choice among participants. The frequency of the translation strategies chosen by each participant is schematized in Figure 6. In the figure, the participants are arranged according to the frequency of adjectives in their choice of the strategies.

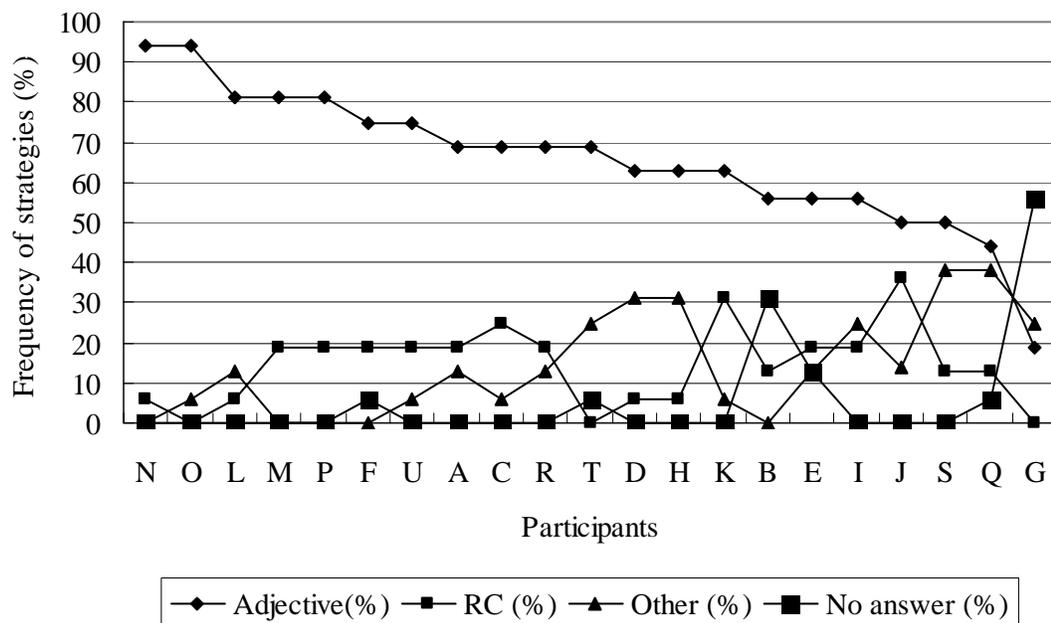


Figure 6: Translation Strategies by Participants

As seen in the figure above, the frequency of translation strategies varied among the participants. Two participants (participants N and O) used adjectives more than 90 % of the time while 1 participant (participant G) used them less than 20 % of the time. Three participants (participants O, T, and G) did not use RCs at all, and 1 participant (participant J) used them more than 40 % of the time. The frequency of choosing other structures ranges from 0% (5 participants: participants N, M, P, F, and B) to about 40 % (2 participants: participants S and K) as well. No answer was used by 6 participants and one of whom (participant G) used it 56% of the time.

The possible reasons of the variations in frequency of the translation strategies among participants will be analyzed later in the Discussion of Results.

Sentence Combination Test

Following the translation test, the sentence combination test was administered to assess the participants' knowledge of RCs. There were two objectives for the assessment: one was to confirm that the participants had at least some knowledge of RC production in English, and the other was to answer research question 2, how the choice of translation strategies is influenced by the participants' command of RCs. The participants were asked to combine two sentences into one using a relative pronoun such as *who*, *which*, *that*, *whose*, etc. There were eight sets of sentences (see Appendix E and F).

The results are summarized in Table 7. As shown in the table, 12 participants out of 21 were able to combine all the eight sets of sentences with RCs correctly (100%). Four participants produced seven sentences (88%) correctly, another four produced six correct sentences (75%), and one produced five correct sentences (63%). The average production rate of correct sentences with RCs was 91% (test scores of each participant are presented in Appendix K).

Table 7: Scores of Sentence Combination Test

Number of correct sentences with RCs	Percent correct	Number of participants
8	100%	12
7	88%	4
6	75%	4
5	63%	1
Average	7.3	Total 21

The results show that all participants had at least some knowledge of RC production, and more than half of them (12 out of 21) appeared to have good command of RCs since they were able to combine all the sets of sentences with RCs correctly. The influence of the command of RCs on the choice of the translation strategies will be analyzed later in the Discussion of Results.

Vocabulary Knowledge Scale

The third task the participants were asked to perform was the VKS (see Appendix G and H). The VKS was employed to assess the participants' knowledge of the adjectives used in the translation test as counterparts of Japanese RCs. The objective of the assessment was to address research question 2, how the transfer of RC use, that is, the choice of translation strategies, is influenced by the learners' knowledge of the adjectives in English.

The target words consisted of 21 adjectives (see Table 4). Participants were asked to complete the VKS elicitation scale for these words. As discussed in Chapter Three, the responses from the participants were converted into test scores of 1 – 5 by the VKS scoring categories. The meanings of scores are as follows:

1: The word is not familiar at all.

- 2: The word is familiar but its meaning is not known.
 - 3: A correct synonym or translation is given.
 - 4: The word is used with semantic appropriateness in a sentence.
 - 5: The word is used with semantic appropriateness and grammatical accuracy in a sentence.
- (Paribakht & Wesche, 1997)

The VKS score for the participants as well as for the target words are shown in Tables 8 and 9. A VKS score for each participant was calculated by averaging scores that the participant obtained for the 21 target words. Similarly, a VKS score for each word was calculated by averaging scores that 21 participants got for the word (VKS scores for each participant and each target word are presented in Appendix L and M, respectively).

Table 8: VKS Scores by Participants

VKS	Number of participants
4.0 – 4.9	8
3.0 – 3.9	12
2.0 – 2.9	1
Total	21

Table 9: VKS Scores by Words

VKS	Target words (adjectives)
5	tall, old, new, smart
4.0 – 4.9	heavy, wide, fine, fast
3.0 – 3.9	talented, quick, delicate, brilliant, nutritious, familiar, detailed
2.0 – 2.9	generous, broad-minded, pleasant, reddish
1.0 – 1.9	engaging, elaborate

As shown in Table 8, all participants except one, who had a score of 2.7, obtained a score of 3.0 or higher. However, Table 9 shows that the score of the target words varies from 1.0 to 5.0. The score of 5 for four words – *tall*, *old*, *new*, and *smart* – indicates that all

participants obtained a score of 5 for these words. On the other hand, *engaging* and *elaborate* yielded a score of 1.0 – 1.9, which means that many participants were not familiar with these words at all. It appears that the words that had higher Standard Frequency Index (SFI) values and were expected to be familiar to the participants, such as *tall*, *old*, *new*, *smart*, *heavy*, *wide*, *fine*, and *fast*, had higher average scores while the words that had lower SFI values and were expected to be less familiar to the participants, such as *generous*, *broad-minded*, *reddish*, *engaging*, and *elaborate*, had lower average scores. The influence of the amount of knowledge of the adjectives on the choice of the translation strategies will be discussed later.

Stimulated Recall

The last part of the data collection was the stimulated recall. The stimulated recall is an introspective research method that helps to investigate a learner's thought process. The objective of the recall session in my research was to study the reasons the participants chose the particular strategies in the translation test.

The interviews with participants were performed according to the stimulated recall protocol described in Chapter Three. While looking at the translated sentences they produced, participants were asked the reasons why they had chosen the strategies with which they translated Japanese RCs and if they had thought about using other ways to translate. If they said that they had thought about other ways, they were asked what the ways were and why they had chosen the strategies with which they had translated. The interviews were conducted in Japanese and recorded on tapes.

The verbal data was analyzed according to the analytical procedure explained in

Chapter Three, that is, transcription, coding categories, and interrater reliability tests. Through the analysis, five categories were generated for the reasons of using adjectives, six categories for RCs, five categories for other structures, and one category for no answer. Interrater reliability tests were performed to obtain the reliability of the categorization. There was a 98% agreement between the rater and the author, and the appropriateness of the categorization was verified.

In the following section, the categories will be explained and the results of the stimulated recall will be reported for each of the four strategies. The examples of participants' comments shown in the following sections have been translated into English by the author.

Reasons for using adjectives. As noted in the results of the Translation Test, adjectives were chosen 223 times as equivalents of Japanese RCs. Participants were asked the reasons that they chose the adjectives, and the reasons were classified into five categories. The categories and the number of responses in those categories are shown in Table 10.

Table 10: Reasons for Using Adjectives

Categories	Number of responses	Percent (%)
Category I: I translated this way automatically. I did not think of any other ways.	85	38
Category II: I could not remember/think of an exact word/expression to translate the Japanese phrase into English, so I paraphrased it. This was the only way I could think up.	61	27
Category III: I chose among a couple of words/expressions.	50	22
Category IV: I had thought of using a RC, but I decided not to do so.	24	11
Category V: Unknown (The author was not able to elicit reasons.)	3	1
Total	223	100

As shown in Table 10, the biggest numbers of responses, 38% (= 85/223), were classified under Category I. Participants whose responses fall into this category chose to use adjectives automatically or subconsciously. They had no doubt about the appropriateness of their translation. Consequently, they had never thought about using RCs. The following were examples of participants' responses. The comments in the parentheses were added by the author.

The expression (with an adjective) came into my mind at the moment I read the Japanese phrase. (The participant gave *old people* as translation of *toshi o totta* meaning an old person.)

In my mind, *se ga takai* (tall) equals *tall* in English, so that I used it right away. (The participant gave *a tall man* as translation.)

Close examination shows that 48 out of 85 instances (56%) in this category involved those adjectives, such as *tall*, *old*, *heavy*, and *smart*, with which the participants had higher average scores on VKS. It seems that the adjectives that were rather familiar to the participants tended to be used automatically.

The second biggest number of responses falls into Category II (27% = 61/223). Participants could not think of exact words to express the meaning of Japanese RCs, and they used adjectives as a paraphrase. The following is a typical comment from the participants:

I didn't know how to translate *kime no komakai* (fine/delicate) skin into English. The word, *sensitive*, might not express the exact meaning of the Japanese phrase, but I could not think up other words. (The participant gave *sensitive skin* as translation of *fine/delicate skin*.)

Twenty-two percent (=50/223) of responses are classified into Category III. Participants in this category had thought of a few options, but not RCs, as equivalent of Japanese RCs before they chose adjectives among them. A typical comment is:

I thought of *smart* and *clever* for *atama no ii* (smart) students. I had heard that the word *clever* connoted cunning, so that I chose *smart*.

When those participants who used adjectives as a paraphrase or an option were asked if they had thought about using RCs, all of them said no. Some of them articulated that they used shorter and simpler expressions than RCs and RCs would be suitable for describing more complicated things or situations.

Eleven percent (= 24/223) of responses are classified into Category IV.

Participants chose adjectives as equivalents of Japanese RCs after they had thought about using RCs. Their typical comments were:

Dekite mamō nai (new) apartment could be expressed as *an apartment which is built recently*. But I did not use it because it would be too long and sound like a literal translation. In addition, I had rarely heard that native English speakers had said so. (The participants gave *a new apartment* as translation.)

I chose *the wide street* over *the street which is wide*, probably because I wanted to use shorter and simpler expressions. Shorter and simpler expressions are better than complicated ones.

Many participants in this category mentioned their thoughts in the instances in which RC use appeared inappropriate for them. Another participant who translated *haba no aru* (wide) street as *the wide street* commented that if one wants to translate Japanese expression literally, one needs to use a RC, such as *the street which is wide*. However, even if the expression with a RC is grammatically correct, his experience in learning English made him doubt if native speakers of English would use such an expression. He thought they would use simpler and shorter expressions with adjectives or one-word modifiers. Another participant responded that *te no konda* (elaborate) plan could be translated as *a plan which is considered carefully* or *a plan which you took time to make*, but these phrases were circumlocutions which learners would resort to when they did not know appropriate adjectives. She translated *an elaborate plan* as *a tricky plan*. The responses revealed that the participants decided to use adjectives, that is, shorter and simpler expressions, instead of RCs because RCs did not appear to be commonly used or

sounded like a literal translation or circumlocution.

There are three responses (1%) in Category V for which the author could not identify the reasons for choosing RCs.

The recalls described above revealed that most adjectives (38%, Category I) were chosen automatically. Many of these adjectives were those that were familiar to participants. About 50% of adjectives (Category II and III) were used as a paraphrase or an option to express the meaning of Japanese RCs. In these cases participants seemed to prefer shorter and simpler expressions, that is, adjectives, over RCs. There were participants who had thought of using a RC (11%, Category IV), but they did not use it because the RC sounded like a literal translation and native speakers would not use it.

Reasons for using RCs. In the Translation Test, participants used 51 RCs as an equivalent of Japanese RCs. For each of these RCs, the participants were asked the reasons for choosing RCs, and the reasons were classified into six categories. The categories and the number of responses are shown in Table 11.

Table 11: Reasons for Using RCs

Categories	Number of responses	Percent (%)
Category II: I could not remember/think of an exact word/expression to translate the Japanese phrase into English, so I used a RC to paraphrase/explain it. This was the only way I could think up.	17	33
Category III: I chose among a couple of options.	14	27
Category I: I used a RC automatically. I did not think of any other ways.	11	22
Category IV: I use a RC in writing and use adjectives in speaking.	4	8
Category VI: I learned the use of the RC in a book/school.	3	6
Category V: Unknown (The author was not able to elicit reasons.)	2	4
Total	51	100

As shown in Table 11, 11 out of 51 responses (22%) are classified into Category I. Participants in this category chose to use RCs automatically. They neither doubted the correctness of their translation nor thought about using other ways of translation. The typical response is:

I thought up this expression, *a voice that I know* (familiar voice), as soon as I read the Japanese phrase.

The biggest number of responses (33% = 17/51) is classified in Category II. Participants recalled that they used RCs to paraphrase/explain the meaning of Japanese RCs. The comments from the participants include:

I didn't know an English adjective meaning *kikioboe no aru* (familiar), so that I

paraphrased it using a RC, *a voice which I had heard before*. If I had known the adjective, I would have written it as *a (familiar) voice*. My translation would be too long and would sound like a literal translation.

I didn't know how to write *te no konda* (elaborate) plan in English, so that I explained it in other words as *the plan which has details*. If I had known an exact word, I would have used it. When I don't know the word, I have to explain it using expressions I remember, which makes my sentence long.

In about half of the instances (9/17) in this category participants commented that they would have used an adjective if they had known or remembered it. Many of them articulated that their translation would be too literal and sound like circumlocution. Their comments reveal that they actually wanted to use adjectives, not RCs.

Category III has the second biggest number of responses, 14 out of 51 (27%).

Participants chose a RC among a few options. Their responses include:

I thought of an expression, *a recent-constructed apartment*, but I wasn't sure if there was such an adjective, *recent-constructed*. Therefore, I used a RC to say, *an apartment which (was) constructed recently*.

The translation *a fast person* came into my mind, but I wasn't sure if it could mean a fast runner. Therefore, I used a RC to make the meaning clear. (The participants gave a translation, *a person who can run fast*.)

A close look at the interviews show that in 11 out of 14 instances in this category, participants had thought of an adjective as one of options, but they decided not to use it because they were not sure if the adjective could express the meaning of Japanese RCs or

the adjective was an actual word.

Small numbers of responses are classified into Category IV, V, and VI. Category IV contains four instances, all of which came from the same participant. He commented that he used a RC because the task was in writing. If the task had been in speaking, he would have used an adjective. Category VI comprises three responses. Participants commented that they used a RC because they remembered that they had learned the expression in a book/school. Category V contains two responses for which the author could not identify reasons for using RCs.

The above results show that RCs were used most frequently to paraphrase the meaning of Japanese RCs (33%, Category II). In about half of the instances participants actually wanted to use adjectives as an equivalent of Japanese RCs and thought their translation with RCs sounded too literal or like circumlocution. In addition, the majority of participants who chose RCs as an option (Category III) had thought about using adjectives before they chose RCs. They did not use them because they were not sure if the adjectives were actual words or not sure about the use of the adjectives with their modifying nouns. Unlike adjectives, not as many RCs were chosen automatically (22%, Category I).

Reasons for using other structures. In the Translation Test, participants used structures other than adjectives and RCs 49 times as an equivalent of Japanese RCs. For each instance, participants were asked the reasons they chose the structures, and the reasons were classified into five categories. The categories and the number of responses in the categories are shown in Table 12.

Table 12: Reasons for Using Other Structures

Categories	Number of responses	Percent (%)
Category II: I could not remember/think of an exact word/expression to translate the Japanese phrase into English, so I paraphrased it using other words/expressions. This is the only way I could think up.	20	41
Category III: I chose among a couple of words/expressions.	16	33
Category I: I translated this way automatically. I did not think any other ways.	6	12
Category IV: I had thought of using a RC, but I decided not to do so.	6	12
Category V: Unknown (The author was not able to elicit reasons.)	1	2
Total	49	100

As shown in Table 12, most responses fall into either Category II or III. About 40% of responses (20/49) are classified in Category II. Participants in this category did not know how to translate Japanese RCs into English, so they paraphrased them with structures other than adjectives and RCs. Their comments include:

I thought that there had to be an adjective meaning *akami o obita* (reddish), but I didn't know the word. Therefore, I looked for the ways to explain the color. (The participant used a prepositional phrase to express *reddish brown: the color is between red and brown.*)

I wanted to remember the word *talented*, but I couldn't do so. Therefore, I

paraphrased *sainou no yutakana* (talented) pianist as *a pianist with lots of talents*. I think *a talented pianist* would be a better translation than mine. My translation sounds like circumlocution.

The interview revealed that in about half of the instances (9/20) participants looked for adjectives or one-word modifiers, but could not remember or did not know them.

Therefore, they paraphrased the meaning with various structures.

Thirty-three percent of responses (16/49) are sorted into Category III. Comments from participants show that they had a few options to translate Japanese RCs, and chose to use other structures. Their comments include:

I thought up two ways to translate *eiyou no aru* (nutritious) meals: one is using *much nutrients* and the other is *good food*. I chose the former one because it showed the meaning of nutrition explicitly. (The participant wrote, *it's important for you to take much nutrients*.)

When participants in this category were asked if they had thought about using RCs, all of them said no. Some of them responded that they would not use RCs when they could come up with shorter and simpler expressions than RCs.

Small numbers of responses are classified in Category I, IV, and V. Category I contains six instances (12%), in which participants used other structures automatically.

There are six responses in Category IV (12%), which came from participants who had thought of using RCs as equivalents of Japanese RCs, but decided not to use them. A typical comment is:

I came up with an expression, *food that has much nutrition*, for *eiyou no aru*

shokuji (nutritious meals), but I thought it would be too long. Therefore, I paraphrased it as *diet food*.⁶

Some of the participants in this category commented that RCs would be good to explain in detail but too long for the cases where they used other structures. Some participants also articulated that paraphrasing with shorter expressions would be better than literal translation with RCs.

There is one response in Category V for which the author could not identify reasons for using other structures.

The recalls described above uncover that about 40% of other structures (Category II) were used as a paraphrase. In about half of these instances, participants wanted to use adjectives, but could not remember or did not know them. When they used other structures as an option (33%, Category III), they commented that they would not use RCs when they could come up with shorter and simpler expressions. Only 12% (Category I) of the time participants chose other structures automatically. The participants had thought of using RCs in 12% of the time (Category IV), but they did not do so. They preferred shorter and simpler expressions than a literal translation with RCs.

Reasons for using no answer. In the translation test, there were 19 instances in which participants did not give any translation for a Japanese sentence, or left the space for the translated words for a Japanese RC blank. The responses from participants were all classified into one category: I could not think of any translation, or I thought the

⁶ *Diet food* is a Japanese-English word coined in Japan meaning nutritious food which people take when they are trying to control their weight.

translation I came up with would be wrong. In the cases where no translation was given for a whole sentence, participants seemed to have had difficulty in translating not only Japanese RCs but also other parts of sentences, such as not being able to identify a sentence structure or not knowing words or expressions to translate a part of the sentences.

Summary. The purpose of the stimulated recall session was to investigate the reasons for choosing particular strategies. The interviews show that when participants chose adjectives, most often they did so automatically using adjectives already familiar to them. When participants chose adjectives as a paraphrase for the meaning of the Japanese RCs or as an option, they did so because they preferred shorter or simpler expressions over complicated one, such as RCs. There were small numbers of instances in which participants thought about using RCs before choosing adjectives. They commented that RCs sounded like a literal translation and might not communicate the intended meaning. They doubted if native English speakers would use such an expression.

When the participants used RCs, they most often did so to paraphrase the meaning of Japanese RCs. In about half of the instances, participants actually wanted to use adjectives but could not remember or did not know them. They thought their translation with RCs sounded too literal or like circumlocution. Moreover, the majority of participants who used RCs as an option had thought about using adjectives. These responses show that in many instances in which participants used RCs, they looked for adjectives as equivalents of Japanese RCs. In addition, even when they used RCs, they perceived that their translation would be too literal and would not be an appropriate one.

When participants chose other structures, they used them most often to paraphrase the meaning of Japanese RCs. Similar to the instances in which participants used RCs as a paraphrase, many participants looked for adjectives but could not remember or did not know them. The interviews also showed that participants would typically not use RCs when they could come up with shorter or simpler expressions using various other structures. There were only several instances in which participants had thought about using RCs before choosing other structures. In these instances, they chose shorter and simpler expressions over literal translation with RCs.

In the first section of this chapter, I presented the results of the three written tests and the stimulated recall. In the next section, the results will be analyzed and discussed in order to answer the two research questions.

Discussion of Results

In this section, the results presented in the previous section will be analyzed and discussed to answer the two research questions.

Research Question 1

Research question 1 asks whether Japanese learners of English transfer the use of RCs in Japanese into English. Specifically, it investigates which strategies they use in English, adjectives, RCs, or other structures, to express the function/meaning of Japanese RCs. This study looks at those Japanese RCs whose equivalents in English are considered to be adjectives.

The results of the translation test found that the learners used adjectives 65% of the

time, RCs 15% of the time, other structures 14% of the time, and no answer 6% of the time. The learners produced RCs only 15% of the time, and the majority of Japanese RCs were expressed as adjectives in English. The results suggest that when Japanese learners of English try to express the function/meaning of this type of Japanese RCs in English, they would typically not use RCs often but would choose adjectives as their equivalents.

While the translation test exhibits a small transfer rate for RCs, the results of the stimulated recall help us to understand the reasons why the learners tended not to transfer the RC use in Japanese into English and used adjectives in the majority of instances. There are several findings that give us a clue to comprehend this phenomenon.

One of the findings is that about 40% of adjectives were chosen automatically while only about 20% of RCs and about 10% of other structures were used automatically. This indicates that many learners thought of adjectives naturally or subconsciously. Among the participants who used adjectives automatically, a few of them gave insight into their automatic response. They commented that they remembered adjectives with their modifying nouns as a set, such as *a tall man*, *old people*, *heavy luggage*, *smart students*, and *a wide street*, since they often use these sets in their writing as well as speaking. They commented that they also often read them in text or hear people using them. Therefore, these adjectives came into their mind with their modifying nouns as soon as they read a Japanese translation of the phrases. In fact, close examination of the recall data exhibits that among those situations in which participants used adjectives automatically, 56 % (=48/85) of instances involve those adjectives, *tall*, *old*, *heavy*, *smart*, and *wide*. It appears that the participants were very familiar with these adjectives as well

as expressions with the adjectives and so they tended to use these adjectives automatically with their modifying nouns.

In addition to the automatic response, there is another fact that could explain the small transfer rate. When participants used adjectives, there were only small numbers of instances (11%) in which they had thought of using RCs. This implies that most of the time (89%) participants did not even think about using an RC at all. Moreover, even when they had thought of using an RC, they decided not to use it because the RC sounded like a literal translation or circumlocution and did not appear to be an appropriate expression. They preferred adjectives because they were shorter and simpler expressions than RCs. The participants even mentioned that native English speakers would not use RCs in these cases. The responses suggest that their preference for adjectives over RCs was based on their perception or judgment that using RCs would produce a literal translation and might not express the intended meaning, and adjectives would be equivalents of this type of Japanese RCs.

Another finding that could give us a clue to understand a small RC transfer rate is that even when participants used a RC, in many cases it was a paraphrase or substitution for adjectives. In about half of the instances in which they used RCs to paraphrase the meaning of Japanese RCs, participants commented that they would have used an adjective if they had known or remembered it. The comment reveals that even though the noun modifying constructions are RCs in Japanese, the participants looked for adjectives in English as an equivalent of the RCs. In addition, the majority of participants who chose RCs as an option had thought of using adjectives before they chose RCs. Many of

the participants did not use adjectives because they were not sure about the use of adjectives they came up with. This means that the majority of RCs used as an option were actually substitution for adjectives. The data implies that participants perceived that English equivalents of the Japanese RCs were adjectives, not RCs.

The other finding was that when participants used other structures as translation strategies, they actually wanted to use adjectives as in the case of RCs used as a paraphrase. The participants who used other structures commented that they would not use RCs when they could think up shorter and simpler expressions than RCs. As exemplified previously in the discussion of reasons of using adjectives, these responses demonstrate the same tendency, that is, there was a preference for adjectives as well as shorter and simpler expressions over RCs. A literal translation with RCs seemed to be the last choice among the translation strategies that the participants were likely to use.

The discussion on the results of the stimulated recall shows possible reasons why participants used adjectives the majority of the time and tended not to transfer RC use into English. There was a strong preference to use adjectives over RCs with those Japanese RCs that would be rendered into English as adjectives. The preference seemed to reflect the participants' judgment that adjectives express the function/meaning of the Japanese RCs and that even though the structure in Japanese are RCs, a literal translation with RCs in English would not express intended meaning.

In this section, the results of the translation test and the stimulated recall were analyzed to answer Research Question 1. In the next section, I will discuss how the transfer could be influenced by the command of RCs as well as the amount of knowledge

of adjectives that are considered to be equivalents of Japanese RCs in English.

Research Question 2

Research Question 2 asks how the transfer of the use of Japanese RCs into English is influenced by the learners' command of RCs in English as well as by the participants' knowledge of adjectives in English which express the concept conveyed by Japanese RCs. There are two issues to examine: one is the relation between the transfer rate and the command of RCs in English and the other is the relation between the transfer rate and the amount of knowledge of the adjectives. In this section, first I will examine the former issue, and then I will discuss the latter one second.

Transfer rate vs. command of RCs in English. In order to investigate the first issue, how the transfer is influenced by the command of RCs in English, the relationship between the frequency of the translation strategies and the results of the sentence combination test will be analyzed. On analyzing the relation, participants are divided into three groups according to the scores on the test. The average frequency of translation strategies is compared with the average scores on the sentence combination test by the groups in Table 13.

Table 13: Average Scores on Sentence Combination Test vs. Frequency of Translation Strategies

Groups	Average score on sentence combination test (%)	Average frequency of translation strategies (%)			
		Adjectives	RCs	Others	No Answer
Group 1	100	66	19	11	4
Group 2	88	75	6	17	2
Group 3	73	56	10	20	14

Group 1 consists of the 12 participants who scored 100% on the test, and Group 2 is made up of the 4 participants who got 88%. In Group 3, there were 4 participants who scored 75% and 1 participant who had 63%. The average frequency of translation strategies for each of the four strategies was calculated in each of the three groups. For example, there were 12 participants in Group 1. The frequencies of translation strategies for the 12 participants were added and divided by the number of the participants, 12, for each of the strategies (the frequency of translation strategies and the test scores of the sentence combination test by participants are presented in Appendix I and K, respectively).

The first point to be noted in Table 13 is that the average frequency of RCs of Group 1, 19%, is notably higher than that of the other two groups, which are 6% for Group 2 and 10% for Group 3. This indicates that generally the participants who had good command of RCs in English produced more RCs than those who were less proficient in forming RCs. The second point to be discussed is that participants in Group 3 chose other structures (20%) as well as no answer (14%) more often than those in other two groups while the average frequency of adjectives of Group 3 is the lowest (56%) among the three groups. It appears that the participants who were less proficient in

producing RCs in English used RCs as well as adjectives less frequently and resorted to other strategies more often than those who were more proficient in forming RCs.

However, it should be noted that four participants in Group 1, who got the highest scores on the test, used adjectives less frequently and chose other structures more often; the frequency of RC use varies from 13% to 36%. In addition, among participants in Group 3 who had lower scores on the test, one participant used adjectives more than 80% of the time and did not use other strategies at all. The data indicates that there were variations on the choice of the strategies among participants even in the same group.

The above discussion suggests that the command of RCs may influence the choice of translation strategies. The participants who had a good command of RCs tended to use RCs when they did not choose adjectives. On the other hand, the participants who were less proficient in producing RCs were likely to use various strategies. However, the command of RCs in English would not be the only factor to influence the choice of the strategies since there were participants who exhibited different patterns on the choice of the strategies.

Transfer rate vs. amount of knowledge of adjectives. The second issue to investigate is how the transfer is influenced by the amount of knowledge of adjectives in English which express the concept conveyed by Japanese RCs. The relation between the average frequency of translation strategies and the average score of VKS by words is shown in Table 14.

Table 14: Translation Strategies vs. Average Scores on VKS by Words

Groups	Average score on VKS by words	Average frequency of translation strategies (%)			
		Adjectives	RCs	Others	No answer
Overall average	–	65	15	14	6
Group A	4.9	85	7	4	5
Group B	3.7	51	25	16	8
Group C	2.5	64	3	27	6

In order to analyze the relation, translated sentences are divided into three groups by the average VKS scores on the adjectives that are considered to be equivalents of the Japanese RCs. In Group A, there were seven adjectives: *tall, old, new, smart, heavy, wide,* and *fine*. The VKS scores of the adjectives ranged from 4.5 to 5.0 and averaged at 4.9, which is the highest among the three groups. Group B consists of eight adjectives: *fast, talented, quick, delicate, brilliant, nutritious, familiar,* and *detailed*. The VKS scores of the adjectives varied from 3.1 to 4.0 and the average score was the second highest, 3.7. Group C is made up of six adjectives: *generous, broad-minded, pleasant, reddish, engaging,* and *elaborate*. The VKS scores of the adjectives ranged from 1.9 to 2.9 and the average score was the lowest, 2.5. The average frequency of translation strategies for each of the four strategies was calculated for each of the three groups (the frequency of translation strategies by sentences and the test scores of VKS by words are presented in Appendix J and M, respectively).

The data in Table 14 shows several skewings comparing to the overall average. One of the skewings is that the adjectives in Group A, which yielded the highest average score on the VKS, were translated frequently as adjectives (85% of the time) comparing to the overall average (65%). Consequently, in this group RCs (7%), other structures

(4%), and no answer (5%) were used less frequently. The results seem to suggest that when participants had enough knowledge of adjectives that were considered to be an equivalent of Japanese RCs, the RCs were translated as adjectives much more frequently, which resulted in producing few RCs, that is, the small transfer rate. Recall that the adjectives in this group were those that participants chose automatically most of the time. This indicates that the automatic response would arise from participants' familiarity with the adjectives.

On the other hand, the adjectives in Group C, which gained the lowest average score on the VKS, were translated with other structures (27%) more frequently than the overall average (14%). Adjectives (64%) were used as frequently as that of the overall average. Consequently, only few RCs were used (3%). Notice that even though the choice of the translation strategies of Group A and Group C was different from each other, the rate of RC use of the two groups was similar, and very small. It seems that a different amount of knowledge of the adjectives did not result in a different transfer rate. The interviews show that most of the adjectives as well as other structures chosen in the sentences in Group C were used as a paraphrase of the meaning of Japanese RCs. Although participants did not come up with adjectives that would be an exact translation, they still used adjectives to paraphrase. For example, a participant who had thought of using a RC, *a person who has a great mind*, as translation of *a generous person* did not use the RC. He chose the adjective *generous* because he thought RCs would be too long to express the meaning or would be a circumlocution. Another participant who translated *a pleasant/engaging smile* as *nice smile* responded that RCs would be useful for literal

translation when learners did not know how to translate Japanese RCs, but if they could come up with adjectives or other shorter and simpler expressions, it would be better to use these strategies rather than RCs. As discussed in the previous section, it appears that there was a strong preference for adjectives or other shorter and simpler structures over a literal translation with RCs based on the judgment that adjectives would be equivalents of Japanese RCs. The preference seemed to make participants use adjectives and other structures frequently in the instances in this group, and consequently the participants produced very few RCs, that is, the smaller transfer rate.

Considering the choice of translation strategies used in the two groups discussed above, the amount of knowledge of adjectives that have equivalent meaning of Japanese RCs appeared to influence the choice of the strategies, but differences in the amount of knowledge did not result in differences in the transfer rate. In the group with higher score of VKS, few RCs as well as few other structures were used since participants chose adjectives automatically in many instances. In the group with lower score of VKS, few RCs were used, too, because participants used adjectives and other structures as a paraphrase most of the time.

Lastly, the data in Group B also show a different pattern on the choice of the translation strategies from the one in the overall average as well as in other two groups. In fact, a closer look at the data in Group B shows great variations among translated sentences on the choice of the strategies. In order to investigate how the amount of knowledge of the adjectives affects the transfer further, I will discuss four instances in Group B. The four cases involve the following Japanese RCs: *ashi ga hayai* (fast

[runner]), *kikioboe no aru* (familiar), *atama no kaiten no hayai* (quick [thinker]), and *eiyou no aru* (nutritious). Table 15 shows the choice of translation strategies for these RCs and the average scores on VKS for the adjectives that are considered to be equivalents of the Japanese RCs.

Table 15: Translation Strategies for Four Japanese RCs

Adjectives equivalent of Japanese RCs	Adjectives (%)	RCs (%)	Other structures (%)	No answer (%)	VKS
Overall average	65	15	14	6	–
fast (runner)	24	67	10	0	4
familiar	29	62	5	5	3.3
quick (thinker)	38	33	19	10	3.9
nutritious	38	10	38	14	3.6

When translating Japanese RCs and their modifying nouns meaning *a fast runner* and *familiar voice*, participants used RCs much more frequently than the overall average: adjectives are used less than 30% of the time, RCs about 65% of the time as an average for the two RCs. This means that participants transferred the use of RCs into English about 65% of the time. The responses from participants show that in both cases most of them used RCs as a paraphrase of exact words or expressions. As for a Japanese RC and its head noun meaning *familiar voice*, participants used RCs frequently, such as *a voice which I have/had heard before*, *some voice I remember*, or *a voice which I know*. However, they commented that they would have used an adjective if they had known or remembered it. They thought that there had to be an exact word, an adjective, to express the meaning and their translation would sound like a literal translation which would not

be commonly used. Regarding the Japanese RC meaning *a fast runner*, most of the participants easily came up with the adjective *fast* but could not think up the expression *a fast runner*. Therefore, in order to express the meaning, they explained it with RCs, such as *a person who can run fast* and *a person who is fast to run*. Some participants commented that they were more familiar with the verb *run* than the noun *runner* so that they tended to use the verb instead of the noun. In both cases, many participants responded that since they did not know a word or expression, either an exact or a paraphrase, to translate Japanese RCs, they had to explain it with words they already knew using RCs. These remarks reveal that when participants used the RCs, most of the time they actually wanted to use adjectives or other shorter or simpler expressions. They knew that their translation might not be appropriate; however, their unfamiliarity with adjectives or idiomatic expressions seemed to lead to RC use in English.

The third instance in which the rate of the translation strategies differs from the overall average involves a Japanese RC, *atama no kaiten no hayai* (quick [thinker]). In this case, participants used adjectives 38% of the time, RCs 33%, other structures 19%, and no answer 10%. There is no prominent strategy that the participants tended to use. The interviews show that 13 out of 21 participants thought of *smart*, *clever*, or *wise* as a paraphrase of *quick (thinker)*. As in *a fast runner*, participants could not come up with an idiomatic expression and explained it with various strategies, such as *a wise person*, *people who has smart brain*, or *the smart*. These responses indicate that the difficulty to think up an exact words or idiomatic expressions promoted using various strategies including RCs.

The last case involves a Japanese RC, *eiyou no aru*, meaning nutritious food. In this case, adjectives were used 38% of the time, RCs 10%, other structures 38%, and no answer 14%. Participants used many fewer adjectives, slightly fewer RCs, and more other structures than the overall average. The recall reveals that many participants who did not know or remember the adjective *nutritious* paraphrased it with other adjectives, such as *balanced (meal)*, *healthy (food)*, or *good (food)*. They also used a noun form of *nutritious*, *nutrition* or *nutrient*, in various other structures, such as *take enough nutrition from food*, or *a high nutrient meal*. However, they used only a few RCs. Some participants who used RCs commented that they wanted to use adjectives or other shorter and simpler expressions instead of RCs. The data implies that while participants did not use an expression considered to be an equivalent of Japanese RCs, they had enough vocabulary knowledge to come up with different adjectives or other structures to paraphrase the exact meaning. It appears that the preference for adjectives and simpler expressions over RCs, participants' knowledge on adjectives as well as vocabulary knowledge in general influenced the choice of the strategies.

Examining the cases where participants exhibited different patterns on the choice of translation strategies shows that most participants used strategies to paraphrase the meaning of Japanese RCs. When participants used RCs, many of them actually wanted to use adjectives or idiomatic expressions with adjectives. They suspected that their translation with RCs would be too literal and would not be proper language use. In addition, when they were able to think up shorter and simpler expressions than RCs, they tended to choose these structures other than RCs. There seems to be a strong preference

for adjectives and shorter and simpler expressions over a literal translation with RCs, which is based on the judgment that adjectives would be equivalents of Japanese RCs, as discussed previously in answering research question 1. In addition, there seem to be several other factors that determine the variation in choices: participants' knowledge on adjectives that would be equivalents of Japanese RCs as well as on idiomatic expressions with the adjectives and participants' vocabulary knowledge in general, which enables them to use shorter and simpler expressions.

Investigating the relation between the choice of translation strategies and the participants' knowledge of adjectives that are considered to be equivalents of Japanese RCs revealed that the amount of knowledge of the adjectives could influence the choice of the strategies, but differences in the amount of knowledge may not appear as differences in the transfer rate. In addition, there are several other factors that may determine the choice. The discussion on the relationship between the choice of the strategies and the command of RCs in English showed that the command of RCs also could affect the choice of the strategies. However, there seemed to be a strong preference for adjectives and shorter and simpler expressions over a literal translation with RCs, and the preference seemed to arise as the small transfer rate in my study. My analysis indicates that there are several factors, including the command of RCs in English and the amount of knowledge of the adjectives that determine the choice of the translation strategies, that is, the rate of transfer. However, learners' preference for adjectives, which reflects learners' judgment that adjectives would be equivalents of Japanese RCs, seemed to be the most influential factor to determine the small transfer rate in my study.

In this chapter, I presented the results of the three written tests – the translation test, the sentence combination test, and the VKS – and the stimulated recall. I discussed and analyzed the data and answered the two research questions. In Chapter Five, I will summarize the findings of my capstone study, identify areas for further study, and discuss the implications that this study has for second language instruction.

CHAPTER FIVE: CONCLUSION

In this capstone project, I investigated whether adult Japanese learners of English transferred the use of RCs in Japanese into English in order to discover if the frequent occurrence of Japanese RCs influences the production rate of English RCs by the learners. This study looked at a group of Japanese RCs that could be translated as adjectives in English, and examined the following two research questions:

1. Do Japanese learners of English transfer the use of RCs in Japanese into English? That is, which strategies do they use in English, adjectives, RCs, or other structures, to express the function/meaning of Japanese RCs?
2. How is the transfer influenced by the learners' command of RCs in English as well as by the learners' amount of knowledge of adjectives in English that express the concept conveyed by Japanese RCs?

In Chapter Four, I presented the results of the three written tests – the translation test, the sentence combination test, and the Vocabulary Knowledge Scale (VKS) – and stimulated recall interviews. I analyzed the data and discussed the two research questions. In this chapter, I will first summarize the findings of this study, placing it in the context of information gained in the literature review. Then, I will explain the limitations of this study and make suggestions for further research. Finally, I will discuss the implications that this study has for second language instruction.

Findings of this study

The major findings of the study were that only a small rate of Japanese RCs that would correspond to English adjectives were translated into English as RCs by adult Japanese learners of English. The stimulated recall revealed that the small transfer rate reflected the learners' preference for adjectives based on the judgment that the function/meaning of this type of Japanese RCs would be expressed in adjectives in English, not RCs. The learners seemed to perceive that using RCs would lead to a literal translation or circumlocution and might not convey the intended meaning. The small RC transfer rate together with the preference for the adjectives as translation strategies of this type of Japanese RCs suggests that the Japanese learners would usually not use RCs as equivalents of the Japanese RCs in English.

The findings in my study have several implications for the role of L1 in the production of English RCs as well as for the study on avoidance. As for the L1 influence on the production of English RCs, the results of my study suggest that the frequency of RCs in Japanese may not play a major role in RC production in English by Japanese learners of English although, as discussed in the literature review, Bley-Vroman and Hounig (1988) proposed that relatively low frequency of RCs in Chinese could directly lead to low production rate of RCs in English by Chinese learner of English. A small transfer rate in my research suggests that Japanese learners of English would typically not try to produce RCs that do not have a direct equivalent in English. Even though more RCs were found in Japanese texts than in English ones in previous research (Kamimoto, Shimura, and Kellerman, 1992; Collier-Sanuki, 1993), the frequent occurrence of

Japanese RCs may not influence RC production in English by Japanese learners. Rather, it seemed that function/meaning of a Japanese RC was more influential than the frequency of the structure in RC production in English. Participants in my study appeared to perceive the function/meaning of Japanese RCs vis-à-vis English adjectives, and the perception was the most important factor in a small RC transfer rate. The learners chose a structure in English based on the function/meaning of the features in the two languages, and did not merely transfer the structure of the features in L1 into English. This implies that when we examine the L1 influence on the production of the features in English, not only the form but also functions of the features both in L1 and L2 should be considered. The findings in my research support what Kamimoto et al. (1992) claimed; in order to propose avoidance as the explanation of underproduction, one should examine form, distribution, and function of the features in L1 that was considered to be avoided in L2. The results of my study imply that functions of RCs in L1 and L2 would play a more important role than the differences in the form or frequency of RCs between L1 and L2.

It should be noted that the behavior of participants in my study was different from those in Li's study (1996). In Li's study, Chinese ESL learners used non-RC structures in English when translating Chinese phrases whose function/meaning would be expressed as RCs in English. In other words, the Chinese learners transferred Chinese construction strategies into English while participants in my study did not frequently transfer construction strategies of Japanese into English. However, Li's study is quite different from my study in its purpose, subjects, and materials; therefore, there would have been many factors that led to the different outcome. In fact, Li's study looked at those English

RCs that do not have equivalents in Chinese while my study examined Japanese RCs that do not have counterparts in English. In order to further investigate factors influencing RC production in English by Japanese learners further, those English RCs that do not have equivalents in Japanese could be studied.

The findings of my research also have implications for the study of avoidance. As discussed above, the frequent occurrence of Japanese RCs may not influence RC production in English by Japanese learners of English. This also means that even though the Japanese language may use more RCs in texts than English does, we cannot simply assume that high frequency of Japanese RCs would directly lead to frequent use of RCs in English. Kamimoto et al. (1992) supported Schachter's claim (1974) that Japanese ESL students were avoiding English RCs because they could not offer an alternative explanation of underproduction as Bley-Vroman and Hough did. They found more RCs in Japanese texts than in English ones, and thus concluded that they could not apply Bley-Vroman and Hough's proposal to Japanese ESL students in Schachter's study and that there was no evidence that Schachter could be incorrect. As Bley-Vroman and Hough argue, the low frequency of Chinese RCs may reflect on a low production rate of English RCs by Chinese learners; however, as I discussed above, high frequency of Japanese RCs may not reflect on RC production in English by Japanese learners. The discussion further implies that even if the Japanese learners do not use English RCs often, we cannot say that they are avoiding the RCs based on the textual frequency of RCs in Japanese. In other words, the relatively high frequency of Japanese RCs could not be a reason to claim that the learners are avoiding English RCs; thus, we do not have to support Schachter's

claim even though more RCs were found in Japanese texts than in English ones.

Moreover, the findings in this study indicate that the Japanese learners were not avoiding English RCs. When the participants had thought about using RCs but decided not to do so, they were not avoiding English RCs because the RCs were difficult for them. Instead, they perceived that using RCs would result in a literal translation or circumlocution and thus made a positive choice to use adjectives or other shorter and simpler expressions over RCs. In addition, the data suggest that English RCs would not be a difficult structure for Japanese ESL learners who have at least intermediate proficiency. Most of participants in this study had a high score on the sentence combination test. In fact, many of them commented in an interview that they used RCs often in their writing mostly to combine sentences. It seems that RCs are a useful tool that allows them to write more sophisticated sentences without redundancies. The stimulated recall employed in this study indeed provided me with data which enabled me to gain an insight about the participants' thought processes regarding their linguistic choices.

Limitations and Further Study

There are several limitations to this study. The research was based on small numbers of Japanese RCs that would be rendered into adjectives in English and involved a small number of participants. Therefore, the results of the study cannot be generalized to all the Japanese RCs of this kind. In order to confirm the tendencies found in this study, further research on larger numbers of the Japanese RCs with larger numbers of research

participants are recommended. Another limitation is participants' levels of language proficiency. In this study participants' proficiency varied from intermediate to more advanced. The wide range of the proficiency might have contributed to variations in frequency of translation strategies among participants. Differentiating the language proficiency level of participants and investigating its influence on the transfer rate would be another consideration. Still another suggestion involves using the translation task in speaking rather than in writing. There was a participant who gave translations in two ways for several sentences: one was with RCs and the other was with an adjective. He commented that he would use RCs in writing and use adjectives in speaking. In fact, most of participants remarked in a debriefing conversation that they usually use more RCs in writing than in speaking. Therefore, differences in the language register might invite different results on the choice of translation strategies.

This study focused on those Japanese RCs whose equivalents in English are considered to be adjectives. In order to better understand whether the distribution and function of Japanese RCs influence the RC production in English by the Japanese learners, different types of Japanese RCs corresponding to other structures rather than adjectives could be investigated. According to the contrastive study by Collier-Sanuki (1993), there are other types of Japanese RCs that would be rendered into English as other structures, such as prepositional phrases and separate sentences/clauses.

For exploring further how the distributional and functional differences of RCs between English and Japanese affect the RC production by Japanese learners, not only the Japanese RCs that do not have counterparts in English but also those English RCs that

do not have equivalents in Japanese should be examined. As discussed in the literature review, the Japanese learners might not produce the English RCs that do not have counterparts in Japanese because they may not be familiar with the use of the RCs and they may try to express the function/meaning of the English RCs with other structures. Further research on whether the learners transfer the structures in Japanese that are equivalents of English RCs into English would provide valuable information for studying factors influencing RC production by the Japanese learners.

Implications

In this section I will consider what the findings in my study may suggest for teaching English to Japanese learners. One of the findings of this study is that most RCs used in the translation task were chosen as a paraphrase of the meaning of the Japanese RCs, and that the participants really wanted to use adjectives. Many participants mentioned that when they did not know the exact translation, that is, the adjective, they had to explain it with RCs. In some cases, even though the participants came up with adjectives, they could not remember or were not aware of idiomatic expressions using adjectives. These responses reveal that unfamiliarity with adjectives as well as idiomatic expressions with adjectives resulted in literal translation with RCs. The fact that the participants had learned English for more than 6 years in Japan and thus were at rather higher levels of English proficiency tells us learning vocabulary items and their use including adjectives indeed takes time and is difficult for learners.

In fact, many participants mentioned the difficulty of learning adjectives, and their

comments pointed out some reasons why adjectives were difficult for them. Many participants stated that they felt their vocabulary size was rather small and that there had to be numerous numbers of adjectives that they did not know. Some participants articulated that learning adjectives was more difficult than learning the grammar rules of RCs. They reasoned that although RCs were complicated as a structure, the rules to form RCs could be learned by repeated exercises, such as a sentence combining. However, how to use adjectives could not be learned by mechanical exercises. Other participants remarked that sometimes they were not sure if adjectives could be used in an attributive position or a predicative position. They knew from their learning experience that there were adjectives that could be used only in one of the two positions. A few participants were also aware that the meaning of an adjective could be changed according to the two positions. Still other participants commented that they were not sure about the combination of adjectives and their modifying nouns, such as an idiomatic expression or collocations between adjectives and nouns. As reported in Chapter Four, many adjectives were chosen automatically, and the main reason for this automatic response seemed to be participants' familiarity with the adjectives as well as known collocations between the adjectives and nouns. On the other hand, in some cases unfamiliarity with idiomatic expressions or collocations, such as *a fast runner*, appeared to lead to a literal translation with RCs, such as *a person who can run fast*. The data suggest the importance and effectiveness of knowledge of collocations in learning adjectives. The remarks of participants show that even though adjectives are not complicated as a structure, they are problematic even for intermediate to advanced learners.

In order to help the learners expand their knowledge base of adjectives, adjectives should be introduced at every opportunity in an ESL classroom. However, the meaning and use of adjectives are context-dependent, so that just memorizing vocabulary items from a decontextualized list would not help learners. Lessons including communicative practice in which students can learn the meaning and use of adjectives in various contexts are necessary. As for EFL learners in Japan, such as the participants in this study who had learned English in Japan, learning English including adjectives would take more time than for students who are learning English in the community where English is a medium of communication because the length of time that the EFL learners are exposed to English is very limited and there is little opportunity to use English in real communication. Often a classroom is the only place where the learners use English. Therefore, lessons including plenty of communicative tasks that incorporate actual process of communication are much desired for the EFL learners.

Finally, I will note my thoughts on participating in the capstone project. Working on the project gave me a chance to study research on avoidance and learn how learners' native language plays a role in the phenomenon. Avoidance may be a genuine behavior of the second language learners, but it is a very complicated issue. Even identifying the phenomenon empirically is difficult, and there are still many unanswered questions. My intention is that my study contributes to the research on this important issue by adding data through documenting the thought process of Japanese ESL learners and providing some ideas for further research. As an ESL teacher, my research has helped me gain a better understanding of factors affecting production of RCs as well as adjectives in

English and needs of the Japanese learners in learning the use of adjectives. I hope the findings in my study will be useful for ESL educators and researchers.

Appendix A

Consent Letter

2005 年 月 日

調査に協力してくださる皆様

私は、Hamlin 大学教育学部大学院修士課程に在籍しております狩野と申します。卒業のための研究の一環としての調査にご協力いただきたくお願い申し上げます。

私の研究では、第二言語習得における母国語の役割を研究するため、英語学習において、日本語がどのような影響を及ぼすかを調べています。調査では、筆記作業を三つと、日本語でのインタビューを受けていただくようお願いいたします。筆記作業は、短い日本語の文章を英語に訳すこと、英語の文を書くこと、また、単語の意味と使い方を答えていただくことの三つです。インタビューは、テープに録音いたします。調査は、全部でおよそ1時間くらいかかる予定です。この調査に参加して下さることで、英語学習の過程について今以上に興味を持っていただければ幸いです。この調査に参加していただくことによる身体、精神への悪影響はございません。

筆記作業で書いていただいたものと、インタビューの内容は、修士論文の中で報告いたします。書いていただいたものや、インタビューでの会話を、例として引用することがあるかもしれませんが、お名前を記録することはなく、匿名となります。皆様からいただいた情報は秘守いたします。また、調査の途中で参加をおやめになることもできます。

この調査は、Hamlin 大学教育学部大学院の許可を得ております。この研究の結果は、修士論文として、Hamlin 大学 Bush 図書館に収蔵されます。また、将来この研究の内容を学術雑誌等に発表することもありますので、御了承ください。

調査にご協力いただけるようでしたら、次ページに署名をお願いいたします。ご質問等ございましたら、Eメールあるいは、お電話にてご連絡ください。Eメールのアドレスは、skano01@gw.hamline.edu、電話は、651-340-0444 です。また、私のHamline大学での指導教官は、Dr. Ann Mabbott、電話 651-523-2446、Eメール amabbott@hamline.eduです。よろしく申し上げます。

狩野早苗

Eメール：skano01@gw.hamline.edu
電話/ファックス：651-340-0444

狩野早苗様

英語学習における日本語の影響を調べる調査への協力依頼の文書を拝見しました。この研究は、第二言語習得における母国語の役割を調査するものと理解しています。

この卒業研究への協力を同意します。

署名

2005 年 月 日

Appendix B

Consent Letter (English translation)

Date

Dear participants;

I am a graduate student working on a master's degree in education at Hamline University. As part of my graduate work, I plan to conduct a research project. The purpose of this letter is to ask you to participate in my project.

My research topic is to study whether and how a certain linguistic feature in Japanese influences native Japanese speakers' writing in English. My main goal is to better understand the role a speaker's native language has in his/her second language use. During the project, I will ask you to do three tasks in written form: translating short Japanese sentences into English, writing English sentences, and determining the meaning and use of words. After the written tasks, I will ask you to participate in an interview with me in Japanese. The interview will be audio-taped. The three written tasks and the interview will take about an hour in total. The main benefit of participating in this project is that you will become aware of the way you learn English. Participation in this study poses no risks to you.

I will analyze your writing and our conversation from the interview and report the findings in my capstone. I may include some parts of the writing and the conversation as a sample in my paper. No real names will be recorded on your writing or in the interview, so your identity will be protected. All results will be confidential and anonymous. You may freely withdraw from this project at any time without any negative consequence.

I have received approval for my study from the Graduate School of Education at Hamline University. The final product of my research will be a printed capstone that will be shelved in Hamline's Bush Library. I may also publish or use my findings in scholarly ways in the future.

If you are willing to participate, please sign your name on the attached form. If you have questions, please contact me by e-mail at skano01@gw.hamline.edu or call me at 651-340-0444 or my advisor at Hamline University, Dr. Ann Mabbott; phone: 651-523-2446, e-mail: amabbott@hamline.edu. Thank you very much for your cooperation and participation.

Sincerely,

Sanae Kano
E-mail: skano01@gw.hamline.edu
Tel/Fax: 651-340-0444

Dear Sanae Kano;

I have received and read your letter about conducting research on the influence of a linguistic feature in Japanese on native Japanese speakers' writing in English. The main goal of this project is to better understand the role of a speaker's first language in his/her second language use.

I assent to participate in the research project you are conducting as part of your graduate degree.

Signed,

(participant)

Date: _____

APPENDIX C

Translation Test

次の文を英語にしてください。

1. 昨日、公園で背が高い男の人をみました。
2. この町には、年をとった人がたくさんいます。
3. 重量のある手荷物は、座席の下に置いてください。
4. 皆が、木村さんは心が広い人だと言っています。
5. この学校には、頭がいい生徒が多いです。
6. 野球部では、足が早い人を探しています。
7. あの幅の広い通りは、何と言う名前ですか。
8. この石鹸は、きめの細かい肌にぴったりです。
9. その男は、赤みを帯びた茶色の車を運転していました。
10. 彼女は、才能の豊かなピアニストです。
11. 私の友達は、できて間もないアパートに住んでいます。
12. 聞き覚えのある声が聞こえた。
13. このゲームは、頭の回転の速い人が有利です。
14. 彼は、手の込んだ計画を考えた。
15. 風邪をひいている時は、栄養がある食事を取ることが大事です。
16. そのウェイトレスは、客に感じの良い笑顔で話しかけた。

APPENDIX D

Translation Test (English translation)

次の文を英語にしてください。(Translate the following into English.)

- 1 昨日、公園で背が高い男の人をみました。

kinou, kouden de [se ga takai] otokonohito o mimashita.
yesterday park LOC back NOM high man ACC see:POL:PAST
(Eng: I saw a tall man in the park yesterday.)

- 2 この町には、年をとった人がたくさんいます。

kono machi niwa, [toshi o totta] hito ga takusan imasu.
this town LOC age ACC took person NOM many exist:POL:NONPAST
(Eng: There are many old people in this town.)

- 3 重量のある手荷物は、座席の下に置いてください。

[jyuryo no aru] tenimotu wa, zaseki no shita ni
weight GEN exist:NONPAST luggage TOP seat GEN under LOC
oite-kudasai.
put:NONPAST:MOD
(Eng: Please put heavy baggage under the seat.)

- 4 皆が、木村さんは心が広い人だと言っています。

mina ga, kimura-san wa [kokoro ga hiroi] hito da
everyone NOM Kimura-Mr. TOP mind NOM broad person COP
to itte-imasu.
QUO say:TE-ASP:POL:NONPAST
(Eng: Everyone says that Mr. Kimura is a generous/broad-minded person.)

- 5 この学校には、頭がいい生徒が多いです。

kono gakkou niwa, [atama ga ii] seito ga ooi desu.
this school LOC head NOM good students NOM many COP:POL:NONPAST
(Eng: There are many smart students in this school.)

- 6 野球部では、足が早い人を探しています。

yakyu bu dewa [asi ga hayai] hito o

baseball club LOC, leg NOM first person ACC
sagashite-imasu.

look for:TE-AS:POL:NONPAST

(Eng: They are looking for a fast runner in the baseball club.)

7 あの幅の広い通りは、何と言う名前ですか。

ano [haba no hiroi] toori wa, nan to yuu namae
that width NOM wide street TOP what QT say name
desuka.

COP:POL:NONPAST:Q

(Eng: What's the name of the wide street?)

8 この石鹸は、きめの細かい肌にぴったりです。

kono sekken wa, [kime no komakai] hada ni pittari
this soap TOP texture NOM fine skin DAT suitable
desu.

COP:POL:NONPAST

(Eng: This soap is good for a fine/delicate skin.)

9 その男は、赤みを帯びた茶色の車を運転していました。

sono otoko wa, [akami o obita] chairo no kuruma o
the man TOP red ACC take:PAST brown GEN car ACC
untenshite-imashita.

drive:TE-ASP:POL:PAST

(Eng: The man was driving a reddish-brown car.)

10 彼女は、才能の豊かなピアニストです。

kanojyo wa, [sainou no yutakana] pianisuto desu.
she TOP talent NOM abundant pianist COP:POL:NONPAST

(Eng: She is a very talented/brilliant pianist.)

11 私の友達は、できて間もないアパートに住んでいます。

Watashi no tomodachi wa, [dekite ma mo nai] apaato
I GEN friend TOP complete time even nonsexist apartment
ni sunde-imasu.

DAT live:TE-ASP:POL:SONPAST

(Eng: My friend lives in a new apartment.)

12 聞き覚えのある声が聞こえた。

[kiki oboe no aru] koe ga kikoeta.

hear recognition GEN exist:NONPAST voice NOM hear:PAST
(Eng: I heard a familiar voice.)

- 13 このゲームは、頭の回転の速い人が有利です。

kono geemu wa, [atama no kaiten no hayai] hito ga
this game TOP head GEN rotation NOM quick person NOM
yuuri desu.
advantageous COP:POL:NONPAST
(Eng: A quick thinker would have an advantage in playing in this game.)

- 14 彼は、手の込んだ計画を考えた。

kare wa, [te no konda] keikaku o kangaeta.
he TOP had NOM crowd:NONPAST plan ACC think:PAST
(Eng: He made an elaborate/detailed plan.)

- 15 風邪をひいている時は、栄養がある食事を取ることが大事です。

kaze o hiiteiru toki wa, [eiyou ga aru]
cold ACC get:TE-ASP:NONPAST when TOP nutrition NOM exist:NONPAST
shokuji o toru koto ga daiji desu.
meal ACC take NML NOM important COP:POL:NONPAST
(Eng: It's important to take nutritious meals when you get a cold.)

- 16 そのウエイトレスは、客に感じの良い笑顔で話しかけた。

sono ueitoresu wa kyaku ni [kanji no yoi] egao de
The waitress TOP guest DAT impresshion NOM good smile INS
hanashikaketa.
talk-offer:PAST
(Eng: The waitress talked to guests with a pleasant/engaging smile.)

APPENDIX E

Sentence Combination Test

次の各組の文(a), (b)を、下記の例のように、関係代名詞 (who, which, that, whose など) を使って一つの文にしてください。各組のうち、文(a)から書き始めてください。

例 1: (a) I thanked the girl.

(b) She helped me.

↓

I thanked the girl who helped me.

例 2: (a) The movie wasn't very good.

(b) We saw it last night.

↓

The movie which we saw last night wasn't very good.

1. (a) I saw the man.
(b) He closed the window.
2. (a) I read about a man.
(b) He keeps chickens in his apartment.
3. (a) I liked the composition.
(b) You wrote it.
4. (a) Mr. Thomas is a teacher.
(b) The teacher prepares his lessons.
5. (a) The student is from China.
(b) He sits next to me.
6. (a) The people were very nice.
(b) We visited them yesterday.
7. (a) I know the man.
(b) His bicycle was stolen.
8. (a) I met a woman.
(b) Her husband was the president of the corporation.

APPENDIX F

Sentence Combination Test (English translation)

次の各組の文(a), (b)を、下記の例のように、関係代名詞 (who, which, that, whose など) を使って一つの文にしてください。各組のうち、文(a)から書き始めてください。

(Combine the two sentences (a, b) using a relative pronoun (who, which, that, etc.) as the example below. Begin with the sentence (a).

例(Example): (a) I thanked the girl.
(b) She helped me.
↓
I thanked the girl who helped me.

例(Example): (a) The movie wasn't very good.
(b) We saw it last night.
↓
The movie we saw last night wasn't very good.

- 1 (a) I saw the man.
(b) He closed the window.
- 2 (a) I read about a man.
(b) He keeps chickens in his apartment.
- 3 (a) Mt. Thomas is a teacher.
(b) The teacher prepares his lessons.
- 4 (a) I liked the composition.
(b) You wrote it.
- 5 (a) The student is from China.
(b) He sits next to me.
- 6 (a) The people were very nice.
(b) We visited them yesterday.
- 7 (a) I know the man.
(b) His bicycle was stolen.

- 8 (a) I met a woman.
(b) Her husband is the president of the corporation.

APPENDIX G

Vocabulary Knowledge Scale

次の英単語は、すべて形容詞です。各単語について、IからVの項目の中で、当てはまる項目に丸をつけ、丸をつけた項目の指示に従って答えを書いてください。

例：big

- I. この単語は見覚えがない。
- II. この単語を見たことはあるが、意味はわからない。
- III. この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)
- IV. この単語を知っている。意味は、 _____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____ (文を書いてください。)
(この項目を選んだ場合は、項目 IV もやってください。)

1. tall

- I. この単語は見覚えがない。
- II. この単語を見たことはあるが、意味はわからない。
- III. この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)
- IV. この単語を知っている。意味は、 _____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____ (文を書いてください。)(この項目を選んだ場合は、項目 IV もやってください。)

2. heavy

- I. この単語は見覚えがない。
- II. この単語を見たことはあるが、意味はわからない。
- III. この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)
- IV. この単語を知っている。意味は、 _____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____ (文を書いてください。)(この項目を選んだ場合は、項目 IV もやってください。)

3. reddish

- I. この単語は見覚えがない。

- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

4. generous

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

5. old

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

6. smart

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

7. fast

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

8. pleasant

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

9. wide

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

10. fine

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

11. talented

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____

(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

12. new

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

13. elaborate

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

14. quick

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

15. delicate

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

16. broad-minded

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

17. familiar

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

18. brilliant

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

19. nutritious

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

20. detailed

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

21. engaging

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっ
てください。)

APPENDIX H

Vocabulary Knowledge Scale (English translation)

次の単語はすべて形容詞です。次の各英単語について、I から V の項目の中で、当てはまる項目に丸をつけてください。III や IV を選んだ場合は、同義語あるいは訳語を書いてください。V を選んだ場合は、その単語を使った文を書いてください。

(Words #1 through #21 are all adjectives. Read categories I through V for each word and check the one that applies to your knowledge of the word. If you check category III or IV, write a synonym or translation of the word. If you check category V, write a sentence using the word.)

例(Example) : big

- I. この単語は見覚えがない。(I don't remember having seen this word before.)
- II. この単語は見たことはあるが、意味はわからない。(I have seen this word before, but I don't know what it means.)
- III. この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語) (I have seen this word before, and I think it means _____ (synonym or translation))
- IV. この単語を知っている。意味は、 _____ (同義語あるいは訳語) (I know this word. It means _____ (synonym or translation))
- V. この単語を文中で使える。 _____ (文を書いてください。)(この項目を選んだ場合は、項目 V もやってください。)
(I can use this word in a sentence: _____ (write a sentence.) (If you do this section, please also do Section IV.))

2. tall

- I. この単語は見覚えがない。
- II. この単語を見たことはあるが、意味はわからない。
- III. この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)
- IV. この単語を知っている。意味は、 _____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____ (文を書いてください。)(この項目を選んだ場合は、項目 IV もやってください。)

2. heavy

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

3. reddish

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

4. generous

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

5. old

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

6. smart

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

7. fast

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

9. pleasant

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

9. wide

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

10. fine

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん _____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、 _____ (同義語あるいは訳語)

- V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

11. talented

- I. この単語は見覚えがない。
II.この単語を見たことはあるが、意味はわからない。
III.この単語を見たことがある。意味は、たぶん _____ (同義
語あるいは訳語)
IV.この単語を知っている。意味は、 _____ (同義語あ
るいは訳語)
V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

12. new

- I. この単語は見覚えがない。
II.この単語を見たことはあるが、意味はわからない。
III.この単語を見たことがある。意味は、たぶん _____ (同義
語あるいは訳語)
IV.この単語を知っている。意味は、 _____ (同義語あ
るいは訳語)
V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

13. elaborate

- I. この単語は見覚えがない。
II.この単語を見たことはあるが、意味はわからない。
III.この単語を見たことがある。意味は、たぶん _____ (同義
語あるいは訳語)
IV.この単語を知っている。意味は、 _____ (同義語あ
るいは訳語)
V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

14. quick

- I. この単語は見覚えがない。
II.この単語を見たことはあるが、意味はわからない。
III.この単語を見たことがある。意味は、たぶん _____ (同義
語あるいは訳語)
IV.この単語を知っている。意味は、 _____ (同義語あ
るいは訳語)
V. この単語を文中で使える。 _____
(文を書いてください。)(この項目を選んだ場合は、項目 IV もやっ
てください。)

15. delicate

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

16. broad-minded

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

17. familiar

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

18. brilliant

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。
- III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)
- IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)
- V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやっってください。)

19. nutritious

- I. この単語は見覚えがない。
- II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやってください。)

20. detailed

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやってください。)

21. engaging

I. この単語は見覚えがない。

II.この単語を見たことはあるが、意味はわからない。

III.この単語を見たことがある。意味は、たぶん_____ (同義語あるいは訳語)

IV.この単語を知っている。意味は、_____ (同義語あるいは訳語)

V. この単語を文中で使える。 _____
(文を書いてください。) (この項目を選んだ場合は、項目 IV もやってください。)

Appendix I

Frequency of Translation Strategies by Participants

Participants	Translation Strategies				Total
	Adjective	RC	Other	No Answer	
A	11	3	2	0	16
B	9	2	0	5	16
C	11	4	1	0	16
D	10	1	5	0	16
E	9	3	2	2	16
F	12	3	0	1	16
G	3	0	4	9	16
H	10	1	5	0	16
I	9	3	4	0	16
J	11	8	3	0	22*
K	10	5	1	0	16
L	13	1	2	0	16
M	13	3	0	0	16
N	15	1	0	0	16
O	15	0	1	0	16
P	13	3	0	0	16
Q	7	2	6	1	16
R	11	3	2	0	16
S	8	2	6	0	16
T	11	0	4	1	16
U	12	3	1	0	16
Total	223	51	49	19	342
%	65%	15%	14%	6%	100%

* Participant J gave 6 alternate translations for 6 sentences.

Appendix J

Frequency of Translation Strategies by Sentences

Sentence	Translation Strategies				Total
	Adjective	RC	Other	No Answer	
1	19	2	1	0	22*
2	20	1	1	0	22*
3	18	0	2	1	21
4	15	0	7	0	22*
5	21	0	0	0	21
6	5	14	2	0	21
7	18	1	1	1	21
8	16	1	0	4	21
9	10	1	9	1	21
10	15	1	5	1	22*
11	15	5	1	1	22*
12	6	13	1	1	21
13	8	7	4	2	21
14	15	3	2	2	22*
15	8	2	8	3	21
16	14	0	5	2	21
Total	223	51	49	19	342
%	65%	15%	14%	6%	100%

* There are 22 translated sentences for 21 Japanese sentences because one of the participants (participant J) gave alternate translations for these 6 sentences.

APPENDIX K

Scores on the Sentence Combination Test

Participant		Score	%
A		8	100
B		8	100
C		8	100
D		6	75
E		5	63
F		8	100
G		6	75
H		6	75
I		7	88
J		8	100
K		8	100
L		7	88
M		8	100
N		8	100
O		7	88
P		6	75
Q		8	100
R		8	100
S		8	100
T		7	88
U		8	100
Total	21	Average 7.3	91

APPENDIX L

VKS Scores by Participants

Participant	Total Score on 21 Adjectives	VKS Score (Total/21)
A	64	3
B	67	3.2
C	65	3.1
D	77	3.7
E	68	3.2
F	74	3.5
G	57	2.7
H	66	3.1
I	80	3.8
J	84	4
K	90	4.3
L	75	3.6
M	87	4.1
N	84	4
O	88	4.2
P	97	4.6
Q	94	4.5
R	91	4.3
S	82	3.9
T	74	3.5
U	79	3.8

APPENDIX M

VKS Scores by Words (Adjectives)

Target Word (Adjectives)	Total Score by 21 Participants	VKS Score (Total/21)
tall	105	5
old	105	5
new	105	5
smart	105	5
heavy	103	4.9
wide	100	4.8
fine	94	4.5
fast	83	4
talented	82	3.9
quick	82	3.9
delicate	81	3.9
brilliant	78	3.7
nutritious	75	3.6
familiar	70	3.3
detailed	65	3.1
generous	61	2.9
broad-minded	59	2.8
pleasant	59	2.8
reddish	53	2.5
engaging	40	1.9
elaborate	39	1.9

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