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A Study of Complement Clauses in Japanese Learners' English

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1. Introduction

In addition to such traditional descriptions of English as comprehensive reference grammars (e. g. Quirk *et al.*, 1985) and EFL/ESL textbooks (e. g. Declerck, 1991), thanks to the recent large corpus-based analysis, non-native English teachers and students can now consult corpus-based descriptions of English grammar such as *Collins COUBILD English Grammar* (Sinclair (ed.-in-chief), 1990) and *Longman Grammar of Spoken and Written English* (Biber *et al.*, 1999, referred to as the *LGSWE* hereafter) and have a better grasp of how English is *actually* used by native English speakers.

These corpus-based grammars have four defining characteristics or principles (Francis, 1993: 137–41): (1) they only cite real examples, (2) they are non-contrastive, "which shows how each item or structure is used in its own right" (p. 138), (3) they are data-driven, not based on the intuition of the compilers, and (4) they are essentially lexical because "lexical patterns are closely connected with the communicative function of the structure" (p. 141). Basically following these four principles, the *LGSWE* contains a wide range of real examples describing its grammatical, lexical, discoursal and other features found in four registers of conversation, fiction, news and academic prose. The goal of the *LGSWE*, based on the analysis of the Longman Spoken and Written Corpus (the LSWE Corpus) of over 40 million words of text, is summarized as follows (Biber *et al.*, 1999: 46):

> ... our goal has been to produce a reference book that is equally useful to students, academic researchers, and pedagogically oriented teachers and materials developers. By focusing on the language actually produced by speakers and writers in different contexts, we offer an important complementary perspective to more traditional descriptions of English grammar.

The main concern of English teachers, particularly in such an EFL country like Japan in this day of rapid globalization where working proficiency of English is required in many spheres of daily life, is how best they can teach and evaluate the quality of their students' English, and the type of data-based reference books such as the *LGSWE* provides non-native English teachers with some reliable directions on the kinds of grammatical, lexical and discoursal features which need to be emphasized more in the classroom instruction instead of trying to cover every possible detailed feature of English grammar which may be rarely used.

2. The scope of the present study

The present paper looks at the finite dependent clauses written by Japanese university students and compare them with those of the native English speakers, so that we may find some new directions to help our students become better speakers and writers of English and also to develop more realistic teaching materials.

Finite dependent clauses can be subdivided into Nominal, Adverbial, Relative, Comparative, Reporting, Comment, and other peripheral clauses (Biber *et al.*, 1999: 193–8). We reported some of the characteristic uses of adverbial clauses by Japanese learners of English at AILA '99 Tokyo (Tanaka, H. *et al.*, Aug. 5. 1999)[1].

The present paper gives the second part of the study on the use of finite dependent clauses and only deals with finite nominal clauses used by the same Japanese EFL learners, and the use of relative clauses will be discussed in the forthcoming paper. Since these nominal clauses are normally used to "complete the meaning relationship" (Biber *et al.*, 1999: 658) of a preceding verb, adjective, noun or preposition in a higher clause, "they are frequently referred to as complement clauses" (*Ibid.*, p. 194), and this is the term we will adopt in the following description.

Finite nominal complement clauses structurally consist of two major types: *that*-clauses and *wh*-clauses. Both of them typically occupy the grammatical position of a noun phrase as Subject as in example (1), Subject Predicative as in (1) and (2), and Object as in (3). It may be extraposed as in (4), and the complementizer *that* is often deleted as in (5). Following Biber and Reppen's study (1998: 145–58), the complement clause is italicized and the controlling element in the higher clause is placed in square brackets [ ] in the following examples. At the end of each example is given the informant identity such as [015], which means this sentence comes from a Japanese student numbered 15. Apparent errors are corrected in ( ) as in example (1). Other quoted examples are identified by the page number of references.

(1) *What impressed me* [was] *that students had to have a(n) English class.* [084]
(2) The reason [was] *that I didn't study English at home.* [458]
(3) I [thought] *that the following proverb was right*: ... [006]
(4) **It** goes without [saying] *that my host family can't speak Japanese.* [392]
(5) I [hope] *I will be able to talk with foreign people.* [051]

In section 3, we will present empirical results of different complement clause types and compare them with those of native English. In section 4, we will look at some lexical associations of *that*- and *wh*-clauses when they are used as Object of the higher verb. In conclusion we will give some implications for teaching English as a foreign language and materials development.

3. Analysis of complement clauses

3.1 Methods of analysis

The L2 data analyzed in this paper comes from the AILA '99 Tokyo Corpus (150 written texts of 25,789 words), which is a part of the WE Tanaka Corpus that consists of three groups of written texts by university students: 515 Japanese English learners (76,000 words), 25 University of Kansas students learning Japanese (5,379 words), and 19 non-Japanese learners of English studying in Japan (3,740 words). The subjects were required to write an essay entitled 'My experience learning a foreign language'. Non-native English learners were asked to write the essay in 40 minutes during the class hour, while native English speakers did so at home.

The data were collected in 1998 by each member of the 'World Englishes Studies' group within the Japan Association of College English Teachers (JACET). In addition to the data from Japanese students, the group originally wanted to collect a comparable number of texts from non-Japanese, non-native English learners and those of native English students to compare similarities and differences found in the texts written by these three groups of students. However, we can now refer to such corpora as the International Corpus of Learner English (ICLE) (Granger, 1998: 10) for non-native corpus and the Louvain Corpus of Native English Essays (LOCNESS) for native students' data. The LOCNESS is a 300,000-word corpus of essays written by British and American university students (*Ibid.*, p. 13). Therefore, the group later decided to concentrate on compiling Japanese students' data and to rely on other available corpora for comparison.

3.2 Overall patterns of use

Although the present corpus is very small and that we have only the written register, we hope to find some preliminary grammatical, lexical and discoursal features of Japanese learner English for further research investigating the patterns of register variation (written and spoken) within learner English.

Table 1: Overall frequencies of *that*- and *wh*-complement clauses

	that-clauses	*wh*-clauses
Subtotal	277 (82.7%)	58 (17.3%)
Total	335 (100%)	

Table 1 shows that, out of 335 occurrences of noun complements, our students use overwhelmingly *that*-clauses (82.7%) as compared with *wh*-clauses (17.3%). We also note from Table 2 that within each type of complement clauses they are mostly used as Object of higher verbs: 89.2% of *that*-clauses and 77.6% of *wh*-clauses. *That* complement clauses controlled by adjectives (3.6%) as in (6), and by nouns (2.9%) as in (7) are extremely rare in our L2 student data.

(6) I was so [afraid] *that I wouldn't talk to him.* (390)

(7) I found the [fact] *that it was English for examination that I'd studied in high school and junior high school.* (361)

Table 2: Functions of *that*- and *wh*-clauses

		that-clauses	*wh*-clauses
Subject/(extaposed)		5 (1.8%)	6 (10.3%)
Verb-controlled	Subject predicate	7 (2.5%)	7 (12.1%)
	Object	247 (89.2%)	45 (77.6%)
Adjective-controlled		10 (3.6%)	—
Noun-controlled		8 (2.9%)	—
Total		277 (100%)	58 (100%)

3.3 *That*-clauses

3.3.1 Discoursal functions of *that*-clauses

We see in Table 3 that the first person singular pronoun *I* as in (8) is the predominant subject of the main clause (224 occurrences (98.2%) of 228 pronoun subjects) and that other noun subjects are very rare (19 occurrences (7.7%) of a total number of 247 occurrences) as in (9). This is because the essay title was 'My experience learning a foreign language' reporting "the speech, thoughts, attitudes, or emotions" (Biber *et al.*, 1999: 660) of the writers themselves. Even when *that*-clauses are used as subject predicates or are extraposed, the stance of the writer is reflected in the complement clause as in (10) and (11), respectively.

(8) First I [thought] *that its pronunciation was very difficult.* (461)
(9) She [told] me *that there was (a) very interesting teacher.* (363)
(10) My first impression of English [was] *that the grammar was troublesome.* (011)
(11) But it is also [regrettable] *that there were no foreign teacher(s) in our school.* (383)

Table 3: Frequencies of matrix and *that*-clause subjects

		Matrix subjects		Complement subjects
Verb + ϕ	Pronoun subjects	First	139 (87.4%)	59 (37.1%)
		Other	4 (2.5%)	21 (13.2%)
	Noun subjects		16 (10.1%)	79 (79.7%)
Verb + *that*	Pronoun subjects	First	85 (96.6%)	38 (43.2%)
		Other	—	4 (4.5%)
	Noun subjects		3 (3.4%)	46 (52.3%)

Table 4: Frequencies of *that* omission and retention

Verb + ϕ	159 (64.4%)
Verb + *that*	88 (35.6%)
Total	247 (100%)

It is also noteworthy from Table 4 that we have more *that*-clauses where the complementizer *that* is omitted (159 occurrences; 64.4%) as in example (5) above, rather than retained (88 occurrences, 35.6%). Included in the former are twenty-four examples of direct quotations as in (12) and eighteen examples where the subject is placed at the end of sentence (13)[2].

(12) He always [said], "*In (a) foreign country, juku-eigo*[3] *is not useful at all....*" (077)
(13) *I spoke English the best*, I [think]. (362)

Biber and Reppen (1998: 154–6) and Biber *et al.* (1999: 681–3) discuss three factors that influence the omission or retention of complementizer *that*: register, common matrix verbs such as *think*, *say* or *hope*, and co-referential pronominal subjects in the main clause and the *that*-clause. Our result of *that* omission (over 60 percent) is close to that of native fiction, while in native conversation the complementizer *that* is omitted almost 90 percent and in academic prose it is almost never omitted (Biber and Reppen, 1998, Figure 11.3, pp. 154–5).

Therefore we may say that register-wise our student essays fall somewhere between native conversation and fiction. They were written during the class hour, but since the topic was about their own personal experiences, their style is not formal enough either to be that of news or academic prose. It is also interesting to note that our result is similar to that of Biber and Reppen's L1-Japanese who show the highest proportion of *that* omission (c. 55 percent, p. 155) among L1-French, Spanish and Chinese university students.

We will discuss in more detail on the type of matrix verbs in section 4 below. Here we only mention that our students use a very limited number of common verbs in their essays.

The third factor that influences the omission of the complementizer *that* is the presence of pronominal subject pronoun in a *that*-clause (Biber and Reppen, 1998: 156), because it marks the start of a *that*-clause, which makes the complementizer less essential. In our data, as Table 3 shows, out of 159 complement clauses where *that* is omitted, there are 80 pronoun subjects and 79 noun subjects. Thus, at least with our limited data the type of subject in the complement clause does not seem to be the crucial factor that influences the omission of the complementizer. However, we might point out that 59 subjects (73.8%) out of 80 pronoun subjects are co-referential, that is, both subjects are the first person singular *I*, which again reflects the nature of the text writing about one's own personal experiences.

3.3.2 Verb controlled *that*-clauses

There are three main types of verb-controlled *that*-complements in our data: as Extraposed Subject, Subject Predicative, and Object. We have no sentences with a "heavy" *that*-clause serving as Subject because all the five complement clauses are extraposed. We have only three examples where the copula *be* is followed by a noun phrase as in (14), and just one example in which a passive construction is used as in (15) and the other has an idiomatic expression as in (16).

(14) ***It*** [was] (a) surprise *that she couldn't eat meat and fish.* (069)

(15) ... ***it*** [is said] *that anyone can speak the foreign language if he stay(s) (in) that country for 3 months.* (051)
(16) **It** goes without [saying] *that my host family can't speak Japanese.* (392)

The second type of verb-controlled complement clause is that which functions as Subject Predicative with the copula *be*. We have only seven examples: *reason* is used four times, *impression* twice, and *pleasure* once. Thus, the *that*-clause presents reasons or "identifies or describes" (Biber *et al.*, 1999: 671) the higher subject as in the following examples:

(17) (The) main **reason** [is] *that I don't use English all the time.* (443)
(18) My second **impression** [was] *that to listen to English was difficult.* (011)

As we discussed in 3.2 above (see Table 2), the majority of *that*-clauses are used as Object of the main verb. Syntactically they have the pattern [**verb**+***that*-clause**] with or without complementizer *that* as we discussed in 3.3.1 (see Table 4). We have three other patterns, though their frequencies are much lower: [**verb**+**direct quotation**] (25 examples) as in (12) above, [**verb**+**N**+***that*-clause**] (only two examples with *tell* as in (9) above, and other examples in which *I think* (16 examples) and *I felt* (twice) are placed at the end of a sentence as if they are added as afterthought as in (13) above, though I had a doubt whether I should count a sentence like (13) as one with a complement clause. The semantic features of the main verbs are to be discussed in section 4.

3.3.3 Adjective-controlled *that*-clauses

We have only ten examples (3.5%, Table 2) of adjective-controlled *that* complements, four of them taking the extraposed *that*-clause. The very low frequency of adjective-controlled *that*-clauses is also noted in the native analysis (Biber *et al.*, 1999: 672–4).

We have only six examples of adjectives taking post-predicate *that*-clauses: *afraid* (4 times), and each occurrence of *happy*, and *sure*. They all take the first person singular pronoun as Subject, and *afraid* and *happy* are typical affective adjectives, "presenting a personal attitude or feeling towards the proposition in the *that*-clause" (p. 672), and *sure* a certainty adjective indicating "the degree of certitude of the proposition" (*Loc. cit.*). Although the subject of the matrix verb and that of the complement clause are co-referential as in (19) and (20), the complementizer *that* is all retained in five examples except one.

(19) I was [happy] *that I was able to write English by jotting.* (093)
(20) I'm [afraid] *I won't cope with the new situation of our society....* (050)

As for the extraposed construction, we have only four adjectives that take extraposed *that*-clauses: *interesting*, *important*, *regrettable*, and *sure*. None of our students use one of the most common adjectives with the extraposed subject such as *clear*, *(un)likely*, *(im)possible* and *true* (Biber *et al.*, 1999: 672). *Important* is the only adjective that our student uses which is included in the list of 86

adjectives that "occur less commonly with an extraposed *that*-clause" (p. 672) in the native data. On the other hand, we have one example of *sure* used with an extraposed construction as in (22).

(21) It was [interesting] *that (I became) ... able to read English....* (045)
(22) It would be [sure] *that I don't like English really.* (422)

It is true that *sure* is the most common adjective that controls *that*-clauses occurring "more than ten times per million words in the LSWE Corpus" (*Loc. cit*), it does not control the extraposed *that*-clause. Thus, based on the comparison of native data and L2 data such as this, non-native teachers can give a more realistic piece of advice to those students who write a sentence like (22) by saying that they should choose one of the other certainty adjectives such as *certain, clear, true*, etc. with an extraposed construction, though *sure* is the most common adjective followed by a *that* complement.

3.3.4 Noun-controlled *that*-clauses

The number of *that* complement clauses controlled by a head noun is very low (eight occurrences; 2.9%, see Table 2), and the complementizer *that* cannot be omitted as those controlled by verbs. Like the LSWE Corpus findings we also find "a pronounced tendency for the noun phrases taking noun complement clauses to be definite and singular" (Biber *et al.*, 1999: 648). Out of nine occurrences we have three sentences with *the fact*, and one occurrence each of *the feeling, the importance, the impression*, and *the policy*. We have one head noun that is definite and plural as in (25).

(23) I found ... [the fact] *that English for examination is not useful.* (361)
(24) I had the [feeling] *that I learned this language earlier than others.* (445)
(25) In spite of [my memories] *that I played with American friends....* (446)

In the Biber *et al.*'s (1999: 648–651) analysis, the head noun *fact* is most frequently used in academic prose, followed by in news, fiction and conversation, since it "reports the author's stance" (p. 648) towards the proposition stated in the *that*-clause. Our data does not reflect any register preference for the complement types, but it is interesting to mention here that, in the native English analysis, verb complement clauses discussed in 3.3.2 are most preferred in native conversation, which "has an overall preference for verbal ... structures ... while academic prose [prefers] to integrate information in noun phrases" (p. 650; [ ] mine), thus presenting the proposition in less personal manner. Three head nouns in our data (*importance, policy* and *memories*) are not found in the list of 48 nouns that occur more than twice per million words in at least one register (pp. 648–9). From these results we may say that, although our students use the same most common noun *fact* in the same structure as in native findings, there are a lot of differences in the variety of vocabulary items that are used in the same slot. The more reliable research on semantic and syntactic similarities and differences between L1 and L2 corpora requires us of more examples, especially when we deal with not so common structures as the present one (see Francis, 1993).

3.4 *Wh*-Clauses

3.4.1 Syntactic functions of *wh*-clauses

Wh-complement clauses can be a dependent interrogative clause as in (26) or a nominal clause as in (27a). Both of these examples are controlled by the higher verb and function as Object of the main clause. As we see in Table 4, out of 57 occurrences, the majority of them (45 occurrences; 77.6%) have the structure: [**verb** + ***wh*-clause**][4]. The *wh*-clause in examples (27a) and (28a) "can be paraphrased by a general head noun modified by the *wh*-clause functioning as a relative clause" (Biber *et al.*, 1999: 683) as in (27b) and (28b), respectively.

(26) "Do you [know] *where the station is*?" (437)
(27) a. I couldn't [say] ***what** I wanted to tell*.... (049)
b. I couldn't [say] ***the thing which** I wanted to tell*....
(28) a. He [asked] everyone ***how** he can/(could) get to Nagoya.* (086)
b. He [asked] everyone ***the way how** he could get to Nagoya.*

We also have six examples (10.3%) in which *wh*-clauses function as Subject as in (29), and (30), and seven examples (12.1%) in which they serve as Subject Predicative of the copula *be* as in (31). We discussed in 3.3.2 that all the *that*-clauses functioning as Subject of the matrix verb are extraposed. However, all of our six examples of the *wh*-clauses functioning as Subject are not extraposed but are placed at the beginning of the sentence as in (29) and (30). We also note that there are no *wh*-complements controlled by an adjective such as in (32) in our data. This may reflect the rather limited variety of syntactic structures which L2 students actually use although they may have no trouble comprehending them used in conversation or in written texts.

Wh-clauses occurring in the subject predicative position usually follow a contracted *That's* in the analysis of native English, particularly in conversation and fictional dialogue (Biber *et al.*, 1999: 684), while the forms of the subject in our seven examples are more varied: *That's*, *That is*, *That was*, *This is*, *It is*, and *It was* (twice) with more uncontracted forms as in (31). This may reflect the register difference: spoken and written.

(29) But, actually *when or how did I learn English* is beyond recall. (446)
(30) ... *what I said* wasn't communicated.... (003)
(31) That [was] *what I've done/(did) for a few months in America.* (466)
(32) I'm not [sure] *when it's open for anybody.* (CONV) (Biber *et al.*, 1999: 684)

3.4.2 *Wh*-clauses as Object

In this section we will examine more closely those 45 occurrences where *wh*-complements function as Object of a higher clause. Included in this category are five examples which have phrasal verbs or those controlled by a preposition as in the following examples:

(33) My mother [(was) worried about] *whether I would keep up with a(n) English class at junior high*

school. (078)
(34) And the attempt [resulted in] *what I am.* (438)

The most common *wh*-form used in our data is *what* (30 occurrences; 66.7%), followed by *why* (6 occurrences; 13.3%), *who* (twice), *when* (twice) and one appearance each of *which* (as a pronoun), *which* (as a modifier), *where*, *how*, and *whether*. We also note that the majority of *what* (28 out of 30 occurrences) function as the object of a verb in the complement clause as in (35) and (36), and that we have only one example each in which it functions as the subject as in (37) and the subject modifier as in (38) in the complement clause.

(35) I could not [hear] ***what*** *my opponent said very much.* (003)
(36) (It was) very difficult to [explain] ***what*** *I think.* (435)
(37) I don't [know] ***what*** *makes me understand English grammar.* (498)
(38) I didn't [know] ***what/(which)*** *Be-verb was correct....* (453)

4. Lexical and structural associations

In this section we will look at semantic properties of controlling verbs of *that* and *wh*-complement clauses when they function as Object of a higher clause. When we examine our findings in more detail we find that a certain syntactic structure is closely associated with a certain class of verbs, and thus there exists a close association between syntactic and semantic properties. When we teach grammar of English to our students we tend to explain a given structure by showing semantically unrelated examples, but the structure in question can be more effectively taught by pointing out to them that it is used with a certain group of words sharing the same semantic domain.

4.1 Semantic associations of *that*-clause controlling verbs

Out of 247 occurrences of verbs which control *that*-clauses the majority of them are mental/ cognition/perception verbs (223 occurrences; 90.3%) and we have a small number of communication/speech act verbs (24; 9.7%). We have an overwhelmingly high frequency of one verb *think* (165 occurrences; 66.8%), followed by *say* (18; 7.3%), *feel* (17; 6.9%), *remember* (8; 3.2%), *regret* (5; 2.0%), *know* (5; 2.0%) and other 15 verbs occurring in very low frequency (see Appendix A).

(39) I thought [that] *I couldn't keep up with my class.* (438)
(40) I [think] *they are Japanized English (words).* (058)
(41) But my parents [say] *I used to speak English well in my childhood.* (413)
(42) I [felt] *that I need to learn native English.* (023)
(43) I [remember] *I was very excited then.* (415)
(44) Now I [regret] *that I didn't go (to) English conversation school.* (382)
(45) ... I only [know] *it* [=the phrase] *was used to ask (for) someone('s) name.* (365)

In the native corpus findings, *think* and *say* occur almost in the same high frequency (Biber *et al.*, 1999: 663; Figure 9.1), followed by *know, see, find, believe, feel, suggest,* and *show*. However, there is a great difference in the use of these verbs across registers (*Ibid.*, p. 668; Figures 9.2–9.5): in fiction, *think, say* and *know* are used in similar frequencies; in news the verb *say* is extremely frequently used, followed by *believe* and *think*; in academic prose verbs like *show, suggest,* and *say* are more frequently used than *think*. Thus, our L2 findings are rather similar to those of native conversation in that the verb *think* is most frequently used followed by *say* and *know*. It is also interesting to note here that L1-Japanese students in Biber and Reppen (1998: 152; Table 11.2) use the verb *think* extremely often, followed by *hope, say,* and *know*.

Therefore, we might conclude this section by saying that our student essays show a similar tendency in the type of verbs controlling a *that*-complement clause with those commonly used in conversation by native speakers of English.

4.2 Semantic associations of *wh*-clause controlling verbs

In this section we will look at some semantic associations of verbs with the *wh*-complement clause. Out of 45 occurrences (including five examples with phrasal verbs) one-third of *wh*-clauses are controlled by one of the cognition verbs *understand* (15 occurrences; 33.3%), followed by other mental/cognition/perception verbs such as *know, remember, hear, think, catch* (meaning 'to understand'), etc. We have only one example each of a small number of speech act verbs: *say, explain, speak, contend* and *ask (N)* (see Appendix B).

(46) ... I could [understand] *who is (was) speaking.* (500)
(47) I don't [know] *why I wanted to enter the school at that time.* (408)
(48) She was talking too fast for me to [catch] *what she said.* (430)
(49) I [wonder] *how/(why) we Japanese can't use English in conversation....* (453)
(50) At first I couldn't [make out] *what they are/(were) saying.* (392)

Native findings in Biber *et al.* (1999: 685–90; Figures 9.10 and 9.4) give the verb *know* as "overwhelmingly the most common verb controlling a *wh*-clause" (p. 685), followed not so closely by *see, tell NP, wonder, ask* and *understand.* When we consider their use across different registers, *understand,* the most commonly used verb in our data, is used more frequently in fiction than in conversation, while *know* is used more often in conversation, followed by in fiction, news and academic prose. We need a larger corpus especially when we want to do some quantitative research like this, and thus we cannot give any definite conclusion from this preliminary study on those verbs which control *wh*-complement clauses except pointing out that our students use some of the most commonly used verbs in the right syntactic structure.

5. Discussion and conclusion

We have described the use of finite complement clauses found in L-1 Japanese student essays, and

tried to compare our findings mainly with those given in the *LGSWE*. We knew from the beginning that these two corpora are greatly different in size and nature, that is, our AILA '99 Tokyo Corpus consists of 150 written texts of 25,789 words, while the LSWE Corpus consists of over 40 million words of text in four—conversation, fiction, news and academic prose—registers.

Our findings, therefore, are only preliminary, but we have found some similarities between these two descriptions. First, in both findings the number of *that*-complements is greater than that of *wh*-complements, and that the adjective- and noun-controlled complements are associated with a more restricted number of adjectives and nouns, respectively. Thus, although the actual frequencies are quite different in these findings, the general tendency in the use of syntactic and semantic features is rather similar, which is a source of relief to a non-native teacher of English.

However, we have also found many points we have to pay special attention to in our classroom instruction. One of them is the fact that there exists a closer syntactic and semantic association than we realize. For instance, we discussed in 3.3.3 above that the adjective *sure* is the most common adjective that controls *that*-clauses as in "I'm *sure that*...." but it is not used in the extraposed construction as in "It is *sure that*...." which appears in our student essays.

We may also point out that two discoursal features of our student essays—the frequent use of mental/cognition/perception verbs that take the complement clause and the rate of *that* omission—are placed somewhere between those of native conversation and fiction. This may reflect the nature of our text written about their own personal experiences learning a foreign language. From this it follows that, when we teach Japanese students how to write a research paper in English, we have to tell them to use a more formal style of writing and a group of lexical items associated with it. One of the best ways of doing so is let them read as many research papers in English as possible during their junior and senior years, pointing out certain specific semantic and syntactic associations along the way.

For our future research, even though we restrict our corpus only to the written texts by the university students for the time being, we need to collect more texts dealing with a variety of subjects. As for the materials development of teaching English as a foreign language we need to pay more attention to the closer syntactic and semantic association than before, and compile a textbook that reflects this fact. The *LGSWE* provides us with a good example, which is "a far-reaching resource that ... has the ability to change the shape of grammar teaching both in countries where English is the principal language and in countries where it is taught as a foreign language" (Carkin, 2000: 414).

Notes

1) At the 12th World Congress of Applied Linguistics (AILA '99 Tokyo), Aug. 1–6, 1999, a poster presentation on the 'Use of conjunctions by Japanese EFL Learners' was given on Aug. 5, which consisted of two studies ('Japanese learners' use of cohesive-markers in English writing' and 'Positions of adverbial clauses in Japanese EFL learners' English') by the WE Studies Group members (Harumi Tanaka, Sachiko Tanaka, Magoji Tamazaki, Yoko Kawamura, Hiroko Hashimoto, and Makiko Fukuda).

The present writer was involved in the latter study and reported that Japanese students place the

adverbial clause *before* the main clause, while native speakers place it *after* the main clause except for the *if*-clause. This may reflect the structure of the most common order of placing the adverbial clause before the main clause in their native language, that is, Japanese tend to state the circumstances before the main clause, which may be unspoken, so that the listener or reader 'understands' the intent of the speaker only from the circumstances.

2) It may be better to treat those sentences with "I think" or "I feel" as in (13) placed at the end of a sentence in a separate category, rather than counting them as those taking the preposed complement clause.

3) *Juku-eigo* is 'cram school English,' the type of grammar-translation method often adopted at these private English schools.

4) We have one occurrence where the verb has an indirect object before the *wh*-clause: He [asked] **everyone** *how he can/(could) get to Nagoya.* (086)

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Appendix A

List of verbs that take a *that*-complement clause: 247occurrences and percentage

I. Mental/cognition/perception verbs (223 occurrences; 90.3%):
   1. The most frequently used verb: *think* (165; 66.8%).
   2. Verbs that occur more than once: *feel* (17; 6.9%); *remember* (8; 3.2%); *regret, know* (5; 2.0%); *hope* (4; 1.6%); *find, hear, notice, realize* (3; 1.2%); *wish* (2; 0.8%).
   3. Verbs that occur only once: *believe, decide, guess, suppose, am ashamed* (this last example may be classified in the category of adjectives that take a complement clause).

II. Communication/speech act verbs (24 occurrences; 9.7%):
   1. The most frequently used verb: *say* (18; 7.3%).
   2. Verbs that occur twice: *ask, tell (N)* (2; 0.8%).
   3. Verbs that occur only once: *answer, teach.*

Appendix B

List of verbs that take a *wh*-complement clause: 45 occurrences and percentage

I. Mental/cognition/perception verbs (39 occurrences; 86.7%):
   1. The most frequently used verb: *understand* (15; 33.3%).
   2. Verbs that occur more than once: *know* (7; 15%); *catch* (meaning to 'understand'), *hear, remember, think* (2; 4.4%).
   3. Verbs and phrasal verbs that occur only once: *decide, forget, study, wonder, have regrets for, learn about, make out, resulted in, worry about.*

II. Communication/speech act verbs (6 occurrences: 13.3%):
   Verb *say* occurs twice (2; 4.4%) and the others occur only once: *ask (N), contend, explain, speak.*